

# AMERICAN VETERINARY REVIEW.

JUNE, 1903.

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## EDITORIAL.

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### EUROPEAN CHRONICLES.

PARIS, FRANCE, April 15, 1903.

Although tuberculous lesions have occupied the attention of all pathologists, the subject is far from being exhausted, and almost every day scientific papers bring out some new discoveries or at least remarks of interest on their presence. Mr. Arloing, in a recent thesis for a medical degree, took for subject that of "Tuberculous Ulcerations of the Stomach in Animals," from whom I abstract the following:

Those ulcerations are rare in animals. Only eleven cases are recorded, and among those one is personal to the author. Most of them occurred in cattle, and it is in the rumen, the many-leaves, or principally the abomasum that they were found. To the point of view of their external aspect and of their histological seat, those ulcerations are identical to those of the stomach of man. Often single, sometimes in numbers, the loss of substance is rounded, with their borders undermined or sometimes thick and raised. Seldom are tubercles of the mucous membrane found on their edges.

In some cases a few bacilli only can be colored from these lesions, which are generally met with in tuberculosis of the perigastric lymphatic glands and also with pulmonary, intestinal or generalized tuberculosis.

The production of those tuberculous ulcerations has been attributed solely to direct bacillar infection of the wall of the gastric compartments, the bacilli of Koch being taken in with food or with expectoration. The possibility of another way for a parietal infection seems to have been overlooked. For in-

stance, for McFadyean, "it is not doubtful that deglutition brings numerous bacilli into the stomach." The relative immunity of the first three is explained naturally by the thickness of the epithelial covering. And for the fourth stomach, its resisting power is due to the acidity of its secretion. For Johnes, the cause is a direct infection of the mucous membrane. But for Mr. Arloing the direct infection cannot be admitted, and for him it is through the general circulation that it takes place. Nevertheless, there is absolute identity in the tuberculous ulcerations of man and those of animals. They are probably more frequent than is supposed, and more complete post-mortem examinations ought to be made to enlarge the list of those already recorded.

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But what is probably more rare than those gastric ulcerations is the record of tuberculosis of the mammæ in a mare, published in the *Archiv. für wissenschaftliche und praktische Thierheilkunde*. It seems it was a mare which showed weakness, loss of appetite, less ambition to work, and one day had the mammæ swollen and presenting a little nodule in one of the posterior quarters of the gland. This soon grew larger, became as big as a hen's egg, hard, elastic, slightly painful and finally fluctuating. A caseous pus was extracted. Two guinea-pigs inoculated with the pus died in three weeks with generalized tuberculosis. The mare's condition grew worse, her temperature raised a little, she still eat very little. The first abscess healed, but two others were formed in the same way and removed for further examination. The disease spread, invasion was manifest through the lung, and the animal died in three months of progressing cachexia. The examination for bacilli in the nodules showed them only in small number.

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This case brings me naturally to speak of one which I have just read in the *Revue Générale de Médecine Vétérinaire* and which throws light on an interesting subject. Tuberculosis of the mammæ, says Mr. Conte, is almost always secondary; it

coincides with the generalization of the lesions and is the consequence of infection of the gland by the circulation. But, if this is the rule, it is not without exception, and several cases are recorded in which the gland was the initial seat of the infection; and, indeed, nothing was ever detected to justify the suspicion of tuberculosis except the condition of the posterior quarter of the udder, which had become hypertrophied, and the seat of a diffused, painless swelling with the perception of nodules in the superficial parts of the gland. Tuberculin settled the question. At the post-mortem the lesions were almost exclusively located in the mammæ. All the visceral organs were free from disease except the parietal pleura, which was slightly diseased. But the mammæ was the almost exclusive seat of the lesions. The posterior quarter weighed over 15 pounds.

An interesting point is the manner in which the entrance of the virus took place. This cow was kept for several years with four other cows free from tuberculosis, as proved by tuberculin test; therefore contamination from them was impossible. But, the owner had for some time used as bedding the straw coming from the straw-mattresses of one of the poor-houses of the town. Soiled by the dejections of those sick individuals, it can be easily understood how the straw could have been virulent and gave rise to inoculation.

Why should it not be so? Nocard has shown how poorly the mammæ in function will defend itself against microbial infections; the mucous membrane of the excretory ducts is not a sufficient obstacle against invading bacilli, and the injection of a virulent culture of bacilli made without injury to the gland or to the muqueuse of its canal is sufficient to insure infection. Is it not possible, then, that contaminated little pieces of straw may have penetrated the teat and that bacilli deposited on the surface of the mucous membrane of the canal have given rise to tuberculization of the gland?

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Last month I sent a quantity of material on the subject of rabies, and certainly I might stop where I left off, but on glanc-

ing over the last report of the Bureau of Animal Industry, I find on rabies some records which I can compare with one which I find in the *Journal de Zootechny*, where a statistic is published by Prof. Galtier, with other interesting material. It relates to the number of rabid cases which were brought to the Lyon School between January, 1890, and December, 1902, a period of thirteen years. 1434 cases of rabies were observed at the sanitary department of the school, viz., 1301 in dogs, 127 in cats, 3 in goats, 3 in solipeds. In the article of Dr. Salmon I find that the University of Pennsylvania holds the record in number—between 300 and 400, said Prof. Pearson. From this, it is certain that the disease prevails more in France, both statistics covering about the same number of years. But, of course, this is of secondary importance. The point to consider is that there is at the Lyon School a special service of sanitary medicine—when I say Lyon School, I might name the other two schools also, as such service must exist there likewise; and from that service of sanitary medicine are issued special records, as the one I am alluding to, and also information of importance from which other similar institutions might derive benefit. For instance, I find in the report of Prof. Galtier that during the same number of years, 4738 have been examined because of having bitten people. Now, what is done with those examinations and what is their object? It is to establish the fact that those animals which have bitten people are or are not dangerous to the public health. If I read correctly, those dogs or cats are brought at stated periods to be examined, and after a certain number of observations are granted a certificate stating that they are free from rabies. The animals are presented one, two, three, four days after having bitten; if nothing abnormal is observed, they are sent home to be brought back on the eighth day or sooner, should any peculiarity of the animal be observed. At that date only a certificate of health is granted. Of the 4738 dogs and cats above mentioned, 4488 received the certificates, the balance, 240, were not presented to the obligatory examination for the obtaining of the certificate.

It seems to me that this is a good way to control rabies and prevent its spreading, that veterinary schools ought to be provided with similar departments and that every owner of an animal which has bitten a person should be obliged to have it professionally examined and its condition certified to, before the restrictions imposed by law could be removed.

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I remember some ten years ago our poor friend Huidekoper entertained the idea of establishing in New York a School of Horse-Shoeing, of which, of course, he would have been the director and principal teacher. Some way or another the plan never came to a successful end. It might have been better if it had, as, after all, every one who owns a horse and many horses would have gained by it and no one would have suffered at the hands of those who would have graduated from the School or College of Horse-Shoeing. And why should it have been so? Simply because of the laws which regularize the practice of veterinary medicine in the State, which all our readers know.

But, unfortunately, such a law does not exist in every country, and there is where the danger exists. In France, the birth place of veterinary science, there is no law to regularize the practice of medicine, and on that account empiricism is more or less prospering. And not only such a law does not exist, but there is no law which prevents the organization of any school. The result is that lately a school of horse-shoeing, *Ecole Supérieure de Marechalerie*, if you please, has been established in Paris. The programme has been published—the faculty organized. An appropriation of funds has been promised, as support, by the Secretary of Agriculture; and the Secretary of War has named two military veterinarians to deliver lectures during the session. There are to be lectures and practical demonstrations on castration; a gentleman from Alfort (?) will show the use of the operating table; lectures on anatomy, physiology, and the diseases of the feet will be given, courses on pharmacology and chemistry, on commercial deontology, and on shoeing, for-

eign shoeing, that of American hotteurs, etc. In other words, an aborted veterinary school.

This is very well, but the veterinarians of Paris, the societies, the professional journals, the schools (professors and students) are all on the warpath, and it may be after all that the school of farriery will have to close before it is open. It would be, in fact, but right and no doubt it would be a great shame and a backward step in the elevation of the profession if the existence of such a school should be allowed; it is already a disgrace that it has been permitted to come to the point it has reached, and no word can be found to condemn the unprofessional act of the graduated veterinarians who are willing to lecture before this legalized class of prospective empirics.

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Impartial chronicler, I have on various occasions spoken about the Physalix prophylactic treatment of distemper in dogs, and have told of the results which have been obtained here, of the failures of the experiments which had been carried out to test it, and also of the writings to which the treatment had given occasion in England. Although all that I said had been published without the slightest prejudiced opinion, I hear that I have been rather pessimistic of the results of the treatment. And, to conclude, I stated that an experiment was to be conducted in England, and that I hoped it would give no facts to conclude in one way or another. I am pleased to see in the *Veterinary Record* the following: "The subscriptions received for the proposed experimental test have now reached a sum warranting a commencement. A place has been secured which has never had any dogs in it and which can be certainly protected against any chance of contagion. One great want now is some puppies between six and sixteen weeks old. We should be much obliged to any veterinary surgeon who could help us to obtain these. The sooner the better, because all must be kept for some time in isolation to insure absolute freedom from accidental infection."

Now let us wait for the work of the commission. But here

is another question which had been presented to the Société de Médecine Vétérinaire Pratique: Does distemper of dogs recidivate? The question was warmly discussed and at the time of adjournment remained unsettled. Some say it may—others it does not.

A. L.

#### THE OTTAWA MEETING OF THE A. V. M. A.

In just three months the great mass of the membership of the American Veterinary Medical Association, as well as many other veterinarians—especially prospective Canadian members—will be *en route* or on the ground to attend the fortieth annual convention of that national body. It is not too early to urge our readers to begin preparation for this important event. It requires a great deal of labor on the part of the Secretary and other officers to have the arrangements so perfect that this meeting shall keep up the record of annual improvement over its predecessors. These officers have a great responsibility. There are a hundred things to be done, the lack of any of which might seriously affect that perfect harmony of arrangement necessary to a successful meeting in its fullest sense.

One of the most important tasks imposed upon the officers, the Secretary in particular, is the preparation of the literary programme; and, yet, while they are in a measure looked to to gather an adequate number of acceptable papers and reports, it is a part which they have no power to supply. They may send forth invitations to all members for contributions, which in the present instance has already been done; but they have no means nor disposition to compel members to furnish them. It is not the spirit of the organization for the Secretary to make personal appeals to special members to perform such a duty; this should be voluntary with each one; each one should feel so great an interest in the success of the meeting and the advancement of veterinary science as to notify the Secretary in good time—two months at least in advance of the date of the meeting—of his intention to present a paper or other material, and this should be regarded as a privilege and an honor conferred upon him by

virtue of his badge of membership in the largest and grandest veterinary organization in the world. In this way the Secretary's office is relieved of much annoyance and anxiety, the programme is developed and diversified by the democracy of authorship, and the time of the Secretary may be more thoroughly devoted to the consummation of the many other details of the preparations. His office has to keep in touch with the local committee of arrangements, with the railroads, the hotels, the clinic, and many minor matters—omitting altogether the worry and anxiety incident upon the fear of failure of any of the cogs in the wheel which he is perfecting.

It is not too early to remind our readers that it is their duty, if within their power, to be in personal attendance, as we are sure it will be their pleasure. A veterinarian daily fulfilling the exactions of private practice or official duties owes it to his health, both mental and physical, to take a respite from such arduous grind, while he enriches his capacity to better serve his patrons and his profession.

The magnanimity of our Canadian brethren, as shown through the reports of their preparations for entertainment, and the universal interest they are manifesting in the approaching meeting, should cause every member in the States to exert himself to show his appreciation of their enthusiastic coöperation. Canada offers many attractions, and those who journey to its capital in September will experience one of the most pleasant and profitable vacations imaginable, while side trips to some of its ancient and quaint cities will ever be remembered by those who are so fortunate as to be able to make them. A number of Eastern veterinarians contemplate returning by way of Quebec, Montreal and Toronto, reaching Ithaca in time to attend the meeting of the New York State Society the following week, or the Pennsylvania State meeting, occurring about the same time.

The REVIEW will in each issue until September publish the programme as rapidly as it is developed.

Get ready for Ottawa!

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### ANOTHER STATE ASSOCIATION FORMED.

And now Texas falls into line, its veterinarians having organized a State Association, "its object being to promote coöperation among its members, to supply a medium for exchange of professional experience, and to encourage, develop and protect the veterinary profession within the State." In transmitting the minutes of its organization meeting, Secretary Paxson writes: "The veterinarians of this State have joined the procession; there are obstacles before us, but we are not wanting in enthusiasm." Query: At the present rate of organization, how many States will there be in five years lacking in laws recognizing and regulating the practice of veterinary medicine?

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THE recent law enacted by Montana, mainly through the efforts of State Veterinarian M. E. Knowles, is worthy of the greatest appreciation by the veterinary profession of the country, as well as emulation in most of the States of the Union. It emphasizes the power which can be wielded by one whose personality inspires the confidence of his fellow-citizens, and in the present instance in a section where veterinarians are so scarce that candidates to fill the very positions created have to be sought for from without. Dr. Knowles has done a great work for his profession in the West, and his colleagues owe him a debt of gratitude for the splendid services he has rendered to veterinary science.

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ALTHOUGH there has been, to our knowledge, no official declaration to that effect, it is the impression of those in a position to know, that the recent alarming outbreak of foot-and-mouth disease in the New England States has been thoroughly eradicated. The officials are still on the ground, however, making house-to-house inspections, so that no single case may be overlooked, and thus perpetuate a plague which never had any right to gain a foothold on this continent. For this grand work the Federal Bureau of Animal Industry has added another gem in its splendid diadem.

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## ORIGINAL ARTICLES.

### HÆMORRHAGIC SEPTICÆMIA.

BY DR. J. BLACK, RICHMOND, MICH.

Read before the Michigan State Veterinary Medical Association, at Lansing, Feb. 3, 1903.

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In selecting the title for this paper I do not claim that the disease described herein is hæmorrhagic septicæmia, but I am impressed with its similarity to the one investigated and classified as such by Prof. M. H. Reynolds, of the University of Minnesota, and Dr. Wilson, of the Laboratory of the Minnesota Health Board, and described by the former in the December and January numbers of the *AMERICAN VETERINARY REVIEW*. There is a strong probability, however, that it is the same disease, as the symptoms mentioned, with, perhaps, two exceptions, I have seen in a peculiar and mystifying outbreak it has been my privilege to witness. It is a matter of regret that the notes taken at the time were mislaid, as it, therefore, becomes necessary to rely upon memory for a description of the history and symptoms. Again, there was no opportunity to hold a post-mortem, owing to the remote location of some of the subjects and to the mercenary disposition of the owners. This account will therefore be of necessity more or less meagre, but it may be of benefit to those who have not seen the disease, and, perhaps, bring out something new from those who have. I freely confess it was, and is, a mystery to me, and my opinion was guarded in every case.

The first cases I saw were diagnosed as cornstalk disease, which has been seen and written of mostly as occurring in the West. The diagnosis, however, was unsatisfactory to me, for the reason that I had not heard of the disease in the East, and, again, as I saw more of it it was witnessed in many cases where no cornstalks were fed. Every case exhibited cerebral or spinal symptoms, and more often both. A veterinarian, writing in one of the reports of the Bureau of Animal Industry, says that he had "observed during some years after a hot dry spell, that cattle

grazing on pastures usually considered sound and healthy, have become affected with indigestion, followed by delirium and coma, but was unable to satisfy himself as to the causation."

All cases of the affection under consideration occurring under my observation were seen in the late summer or early fall, and the cases seen near St. Clair were pastured upon a farm on which the grass was exceedingly parched and dead looking, the weather having been continuously dry and hot for a long period.

In the township of Columbus, in August, 1900, was seen the first case I will mention. A cow standing in the stable with her hind parts toward the stanchions, her head was swaying from side to side, and, as I remember it, she was dull, and eyes staring; upon being forced to move she would stagger. Temperature  $105^{\circ}$ , constipated and complete anorexia. Prior to the attack she had been eating sewed corn, which had been cut and thrown to her. I called it cornstalk disease, and gave an unfavorable prognosis. She died in a few days, as did another cow a little later, showing the same symptoms and belonging to the same owner.

During the month of July, 1901, in response to a telegram I went to St. Clair (or rather near there), where I found five cattle in different stages of an unusual outbreak. *Case I.*—Steer, two years old, was found in the yard sheltered from the rays of the sun by an improvised tent. He was lying on his broadside, apparently oblivious to his surroundings. Pulse 120, temperature  $103^{\circ}$ , respiration very rapid, constipated. He was turned, when he got up on his sternum, but no change for the better. *Case II.*—Steer, same age, respirations and heart about as Case I. Temperature  $105^{\circ}$ , lying on sternum and making repeated efforts to get on his feet, without accomplishing it, however. *Case III.*—Fine Holstien cow, lying on her breast, with hind legs extended backwards. She was bright and intelligent looking, and was apparently suffering no inconvenience; pulse, temperature, and respirations not much disturbed. Unable to get up. *Case IV.*—Cow standing tied in stable, showing marked

cerebral symptoms, continually bawling, very excited, apparently vicious, as she had the attendants frightened out. When her head was elevated she would drop in a faint, but would get up after a moment. Pulse about 60 or 70, temperature  $105^{\circ}$ . Was in a dying condition. She died a few hours after I saw her. *Case V.*—Cow, standing; no apparent pathological condition present except when moved she would stagger; constipation was present to a less degree than in any of the others. This was the only case that a hopeful prognosis was given of. However, she, with the other four mentioned, died, as did seven others from the herd within two weeks after the first case was stricken. The pasture was explored with great care for evidence of malicious or accidental poisoning, but none was found. Diagnosis, cerebro-spinal fever, caused by ptomaine poisoning. The water on this farm was excellent. Treatment was purgatives, stomachics, and where necessary nerve and brain sedatives. About the only thing I was positive about in the whole business was that the treatment was useless.

In August of the same year two more cases, twelve or fourteen miles from the last mentioned, occurred, which are of sufficient interest to note. *Case I.*—Cow in shed was standing on her hind legs and on her knees with her head lying on the floor; complete coma, vitality very low, pulse very weak and rapid. As she was considered to be dying nothing was done for her. *Case II.*—Cow in another part of the shed with head pushed into a corner among a lot of barrels, she was forced back, but not without much effort, only to push immediately upon being released into a beam in front. Temperature  $104^{\circ}$  or  $105^{\circ}$ ; pulse about 70. Remembering my non-success in treating the St. Clair cases and calling to mind the good results of potassium iodide in several cases of cerebro-spinal meningitis in the horse, I prescribed it for this case, and gave an unfavorable prognosis; however, she recovered in about four days.

I call to mind one more case that was thought to be hopeless that recovered by this treatment. This was in the summer of 1902, and there was some question as to the diagnosis, as her

symptoms may have been caused by acute indigestion. By your permission, I will read some extracts from Prof. Reynolds' article referred to above. In speaking of the cause, history and symptoms you will also be persuaded that my presumption is not groundless.\*

When I had determined to present these cases to this honorable body I wrote to the owner of the St. Clair herd asking him if he had noticed any red spots when skinning, and I have here his reply [letter was read]. Here is further evidence that the disease I have endeavored to describe is hæmorrhagic septicæmia, and I will leave it to your consideration, and will be pleased to hear from any member who has had any similar cases.

AT the annual meeting of the Louisiana State Medical Society, held at New Orleans, April 30, Veterinarian Wm. H. Dalrymple (an honorary member of that Society), read an interesting paper on "A Few Differential Characteristics in the Anatomy of the Lower Species, Compared to that of Man, with Passing Attention to Analogy and Homology."

IMPORTANT CHANGES IN MINNESOTA.—The Minnesota legislature has recently passed a law establishing a Live Stock Sanitary Board, removing the live stock sanitary work from under the State Board of Health, and placing it in charge of this new board. This board is composed of five members, three men who are financially interested in live stock, and two graduate veterinarians; there is also provided a secretary and executive officer, a graduate veterinarian, who is to be the executive head of the work; a field veterinarian, a bacteriologist and lawyer. The four latter are not members of the Board. The secretary and executive officer and field veterinarian are to be graduates, as in the case of the two veterinary board members. This now places the Minnesota veterinary sanitary work under the independent management of a veterinarian. Previously this work has been done under the State Board of Health. Readers of the REVIEW will be glad to know that Dr. S. H. Ward, of St. Cloud, has been elected secretary and executive officer. Drs. Cotton and Reynolds have been appointed by Governor Van Sant as the two veterinary members. The position of field veterinarian has not been filled at this writing.

\* See AMERICAN VETERINARY REVIEW, Vol. XXVI., Nos. 9 and 10.

## EVERSION OF THE UTERUS IN THE MARE.

BY DR. A. YOUNGBERG, DETROIT, MINN.

Read before the Minnesota State Veterinary Medical Association.

Our worthy Secretary having invited me to appear as one of the essayists of this meeting and believing it to be the duty of every practitioner to lend his hearty support for the advancement of our profession, I herewith present my findings on the above entitled subject, trusting that some may be benefitted thereby. During the past twelve years I have had considerable experience in treating this trouble, and am pleased to state that by constant and careful attention I have been generally successful.

This very troublesome affection (eversion of the uterus), known as falling of the womb, is not very common in mares, but is no doubt exceedingly dangerous and most invariably ends in the death of the animal if not speedily and carefully handled.

I have found the cause of this trouble to be the failure of the uterus to contract after difficult parturition. The after pains will sometimes lead to the fundus passing into the body of the organ, and the adhering placenta, assisting it by its weight to pass out through the vagina and the whole everted organ appears externally and hangs down on the thighs. It may also be caused by relaxation of the ligaments, the duty of which is to retain that organ in position.

The result of the eversion of this organ, is rapid engorgement, and swelling which, after it has been everted from one to two hours, is many times its natural size and of dark red color and very easily torn—and right here is where a veterinarian has to face something that will end in death if not speedily and carefully handled.

In returning an everted uterus, the standing position is preferable to that of a recumbent position, as the abdomen is more pendent and there is less obstruction for its return.

If the mare be vicious, it may be necessary to hobble her

hind limbs to prevent kicking. After applying the hobbles, we sometimes find an adherent placenta, which together with every vestige of filth must be removed. Next,—impaction of the rectum with fæces and distension of the bladder with urine—all of which must be removed, the box-stall well bedded and the mare warmly clothed before the organ is prepared for replacement into its proper position; then give chloral hyd. diluted in milk or oil, or morphine—intertracheally, to prevent straining.

The best way to clean the uterus is to take a common wash-tub half filled with warm water and adding thereto plumbi acetatis one ounce and tincture opii two ounces. If the organ is very filthy, and congested together with some hæmorrhage, the wash should be changed until the organ is perfectly clean. I have changed this solution three times while treating a mare and have failed to discover any ill effects from the use of plumbi acetatis.

After all filth and foreign substances is removed, the organ must be replaced as carefully as possible. This is best done by bandaging the uterus with a clean cotton bandage 9 yards long and five inches wide, winding the uterus as tightly as possible, beginning at the most dependent parts. This bandage serves two good ends: 1st, it forces into general circulation the enormous mass of blood which engorged and enlarged the organ; 2d, it protects the delicate and friable mucous membrane of the uterus from being torn by the operator's hand—which will invariably cause death—but when covered with a bandage it can be safely manipulated without danger of laceration.

The next step is to push the organ back into its proper place which is best done by the operator taking hold of the mass, pushing it into the vulva, while two assistants, one on either side, open the lips of the vulva, lifts up the organ on its centre, and unrolls the bandage as the mass passes into the vagina. This manipulation may be made with perfect safety so long as the organ is closely wrapped in the bandage and not unrolled too rapidly, but just fast enough to prevent the uterus passing

out in folds between the bandage and the outer edges of the vulva.

After a portion of the organ has been introduced into the vagina the rest will usually follow with increasing ease.

To complete the work the operator should insert his clean hand and arm extended full length within the uterus and move from point to point so as to straighten out all parts of the organ so that no portion remains inverted within another, which will prevent further straining.

The operator now removes his hand and inserts two large sutures into the lips of the vulva,—the most inferior to be removed after 24 hours, and the other 12 hours later. In some cases the contractions are too violent to allow of the return of the womb even with large intratracheal injections of morphine or chloral hyd.; in such cases I resort to tracheotomy. The mare should be watched constantly for 24 hours, and if straining returns, repeat the opium or morphine and feed her on warm bran mashes and give sodium sulphate in her drinking water to prevent constipation, which generally follows, and keep her warmly clothed to prevent chills, which would have a tendency to induce metritis.

In conclusion, let me say, that since I have followed the above described method I have had fairly good results.

In all cases the operator should remember, first, to prevent straining without the use of chloroform; second to replace the uterus without injuring the mucous membrane, and that any attempt to replace the organ without its being well covered with a bandage, will result in the operator lacerating the mucous membrane, which will result in metritis and death in seventy-two hours.

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THE RACE-HORSE "DR. RIDDLE" died at Morris Park last month from the effects of a dose of cocaine administered for the purpose of sustaining his speed, or, as it is popularly called, "dope." It is said on good authority that the quantity given was eight grains. Very much larger doses have been given with impunity, so far as the life of the horse or even danger to it is concerned.

**PURPURA HÆMORRHAGICA.**

BY J. W. COOK, V. S., DULUTH, MINN.

Read at the Annual Meeting of the Minnesota State Veterinary Medical Association.

The disease known as "purpura hæmorrhagica" is known to exist among horses all over the world; there is no country or climate to my knowledge that is exempt. It is an eruptive non-contagious fever usually but not uniformly occurring as a sequel to another disease. I will not attempt to describe the symptoms, as they are too well known and too easily diagnosed by the practitioner to warrant a description; the only disease with which it might be confounded is scarlatina in its early stages; so that in this paper I will simply confine myself to what I believe to be the best course of treatment.

In this disease, as in many others, we cannot confine ourselves to any radical treatment; sound practice always rests upon science and good sense; science serves to make clear the principles and reasons upon which we must depend for the proper and successful treatment of any disease with which we may come in contact, and good sense helps us in the application of sound practice and right methods; combine the two, and they are after all only the rational and natural methods supplemented and reinforced by reason.

Some cases will commence to improve under proper treatment and rational measures on the third or fourth day; other cases take a longer period, the fever being of a remittent character, and the animal is at all times liable to a fatal termination from an extravasation of blood into the thoracic or abdominal viscera or from swelling of the head and interference with the respiratory functions. I have seen one case where death occurred without the usual external manifestations, but the post-mortem examination revealed many of the characteristics of this disease.

*Treatment.*—In treating this disease we must see that the animal has pure air, light, comfortable quarters and be removed from all offensive smells, badly drained stables, and, if the weather

will permit, place him in an open paddock or out to pasture.

I have never used the antistreptococcus serum, and from conversation with some veterinary surgeons who have, I have not been very favorably impressed with it. In treating this disease we must always remember that extravasation of blood depends more upon the condition of the blood than upon the blood vessels; for this reason to alter the abnormal fluid condition of the blood, chlorate of potash has a marked effect. I usually give in the earlier stages an ounce morning and evening and always a dose of aloes, from one-half to an ounce, combining with the aloes two ounces of turpentine and one ounce of tr. of iron. As the animal improves I give an ounce of the chlorate of potash daily and also an ounce of turpentine and tr. of iron, and to overcome any astringent effect the styptics may have on the bowels I give every second day, as the case may require, an aperient of from eight to sixteen ounces of raw linseed oil. Usually about the fourth or fifth day I commence to use alcoholic stimulants and nux-vomica in small doses—say, two ounces of alcohol and one drachm of nux-vomica three times per day until all of the swelling has disappeared. Give the animal a liberal supply of food, grass if in season, green cornstalks, with a good feed of bran and oats three times per day, and when the swelling has commenced to subside exercise him daily, and at any time the kidneys are not working freely use nitrate of potash and nitrous ether.

*External Treatment.*—In the early stages and before there is any great swelling, leave him alone, but when the extravasation is profuse puncture him freely, using antiseptic precautions, clipping close the hair and washing the surface with a strong antiseptic solution of carbolic acid, creolin, bichloride of mercury, etc. If the head be much swollen and there is danger of suffocation from tumefaction of the nostrils, continuous cold sponging must be ordered with cold water and some astringent solution, as vinegar, sugar of lead, terchloride of iron tincture well diluted, and if the dyspnoea becomes too great from this cause tracheotomy must be performed.

My reasons for preparing this paper on pupura hæmorrhagica are these : I believe when preparing a paper on any disease it is well to take one in which your efforts are generally crowned with success, as by so doing you may be of some assistance and possibly give some pointer to your brother practitioner, who may not have been so successful in that particular disease. Another reason is that many practitioners do not puncture the swellings in cases of this disease, and I am well aware of the fact that this method of treatment may be severely criticised, but this I have always done, and used the lance freely, making a dozen incisions at one time in as many different parts of the body, allowing many gallons of fluid to escape, thereby relieving the strain on the excretory organs that must have been otherwise severely taxed to get rid of the extravasate, as many times we are not called to see such cases until the extravasation is very profuse, and of course the time for all measures of cutting short the course of the disease is gone by. When such is the case, I am inclined to believe that without puncturing the swellings freely all other efforts are liable to prove futile. I have never yet had any case where sloughing of the tissues followed the punctures. Following the treatment here outlined, I have never had a fatal termination in any case but one, and I have had many of them, and in different climates, and that one case was of such unusual characteristics as to warrant a description.

*Patient.*—A bay gelding, six years old, property of Great Northern Express Co. The horse had apparently been in the best of health up to the evening in question, when he came in from work, eat his supper as usual and in half an hour after, or about 7 P. M., when led out to water, was noticed to be very stiff and suffering from some disease. I was called at once and was much puzzled to make a diagnosis. The symptoms were as follows: Pulse 58, temperature 103, respiration accelerated, slight attempts to lie down, perspiring about the flanks and shoulders and a very pronounced swelling through and including the two hind quarters; 8 P. M., pulse 65, temperature 104, swelling in the quarters increasing rapidly and more pain;

10 P. M., pulse 85, temperature  $105\frac{1}{2}$ , no attempts to lie down, swelling much increased, extending as high as the anus; 12 midnight, or only six hours from coming into stable, pulse 110, scarcely perceptible, temperature 104, respiration very rapid, mucous membranes pale and blanched, sighing breathing, sweat breaking out all over the body, and in fact showing every symptom of approaching death; fell in the stall and was with assistance raised to his feet and helped outside, as I thought he could not live 10 minutes. He rallied some, however, and lived until next day at 4 P. M., when he died. Showing, however, next morning additional swelling on belly and breast, mulberry spots in the nostrils, hæmorrhage from the lungs, swelling extending down to the hocks and hind quarters large enough for a horse of double its size.

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THE PARIS-MADRID AUTOMOBILE RACE caused more deaths in one day than all the race-horses have done in half a decade.

THE GOVERNOR OF NEW JERSEY THROWN FROM HIS HORSE.—It is the habit of Governor Franklin Murphy, of New Jersey, when the weather permits, to take a little canter before breakfast. The veterinary profession, not only of his state but the entire country, read in the newspapers with much regret of the Governor's recent accident, when he was thrown from his horse and painfully though not seriously injured. It is a pleasant duty for us to announce that he has fully recovered from his accident. He is an honorary member of the Veterinary Medical Association of New Jersey, and the signing of New Jersey's veterinary law by his Excellency was an act that has endeared him to the profession whose special province it is to care for and alleviate the sufferings of that part of the animal creation over which man has dominion.

THE PASSAIC COUNTY (NEW JERSEY) VETERINARY MEDICAL ASSOCIATION is the banner local organization of the country in two respects. In the first place, every licensed veterinarian in the county is a member in good standing, and in the second place, all dues of every member are paid in full. It would be well for veterinary associations, local and state, to take note and profit by the earnestness and activity of the members of this local association that is so nobly supporting the advance movement of the State Association.

## SEPTICÆMIA AND PYÆMIA FROM A MEAT INSPECTION STANDPOINT.

BY C. H. JEWELL, D. V. M., KANSAS CITY, MO.

Septicæmia is a term loosely applied by meat inspectors in post-mortem diagnosis of those diseases which cannot be properly classed under any of the specific septicæmic diseases of which the etiology and post-mortem lesions are now well understood. Among the latter class may be mentioned anthrax, black quarter, hog cholera, swine plague, hæmorrhagic septicæmia, and many others.

Septicæmia may be defined as a general febrile condition, caused by the entrance into the organism of pathogenic bacteria or their toxins. These organisms may first enter the circulation and then elaborate their poisonous products, or the toxin may be produced at the seat of entrance. One thing necessary is a preëxisting wound which has become infected. The toxic product once in the circulation acts in one of two ways, namely, by destroying the red blood cells, or by influencing the tissues of the whole body. The germs causing this disorder are many, and the same as those producing pyæmia, namely, *staphylococcus pyogenes aureus* and *albus*, *streptococcus pyogenes*, *pyocyaneus*, *bacterium coli communis* and other pus-producing organisms. In septicæmias they differ somewhat in their activity, and act upon a system with a modified susceptibility, and are void of lesions of the internal membrane of the vascular system. The symptoms may be produced by the introduction into the system of putrefactive products of dead animal tissues. Such a condition is spoken of as *septic intoxication*, whereas, when the microbes gain entrance into the blood and multiply therein, it is known as *septic infection*.

In any prolonged case of septicæmia the tendency is to the formation of suppurating foci, and develops a condition spoken of as septicopyæmia. Thus giving rise to the oft mistaken idea of the identity of the two diseases.

In connection with septicæmia can be mentioned that pecu-

liar phenomenon termed aseptic or resorption fever following the intravenous injection into the blood of healthy animals, of fine foreign particles, normal salt solution, well water, pepsin, pancreatin or trypsin. It has been attributed to the introduction and metabolism of fibrine and other elements, but manifestly arise also from the solution of the red blood globules.

*Symptoms* of septicæmia are ushered in by staring coat, slight chill, rarely violent, such as seen in pyæmia; rapid rise of temperature, 102-104, which persists for 3 to 7 days without the marked remissions of pyæmia; weak compressible pulse; great muscular debility; hurried, shallow breathing, loss of appetite, emesis in vomiting animals, dusky or yellow mucosæ, urine scanty and high colored; dullness and often nervous twitching, delirium, stupor or paraplegia; either constipation or diarrhœa.

*Prognosis* grave unless the infection be slight, or the active cause can be readily removed, as the removal of a putrefactive area or of a blood clot undergoing putrefaction and absorption.

*Lesions.*—In fermentation or resorption fever no lesions are present. If arising from pathogenic bacteria or their toxins the blood is dark and coagulates feebly if at all. Spleen is enlarged, softened, dark color and gorged with blood; there is liable to be petechia of the serosæ, mucosæ, and of the solid organs; hæmorrhages of a diffuse character and serous exudate and infiltration of the tissues; congestion and even hæmorrhagic condition of the lymph glands; kidneys congested, often swollen and exudates between the glomeruli and their capsules.

*Disposal of the Meat.*—If septic infection be general or the toxic products have produced marked changes in the tissues, the meat should be condemned and sent to the rendering tank; but should the infection be slight and confined to a localized area, the remainder of the carcass being in a healthy condition, I see no reason why the meat should not be passed for food after removal of the affected tissues. The specific septicæmiæ mentioned renders the meat unfit for food.

Pyæmia is a morbid condition characterized by the formation in different organs of multiple abscesses dependent on the

transference in the blood stream of infected clots or particles containing pus microbes, and their arrest at distant points so as to cause foci of suppuration commencing with the intima of the vessels.

*Causes.*—The entrance of any of the previous mentioned pus microbes into a deep-seated wound or lodged subcutaneously. Trivial wounds or those having good drainage and ready access to the oxygen of the air are not prone to cause this malady. The natural susceptibility of the animal is important, as seen in the horse and ox. A debilitated system lowers the resisting powers and induces an attack.

A complex infection appears at times to overcome the vital resistance more effectively than the presence of even a potent microbe alone, owing to toxic products of associated germs lessening the resisting powers of the tissues, and allowing the potent germ to make headway. In ordinary cases the occurrence of thrombosis is an important step in its causation, especially when the clot is produced by bacteria. These clots soften and break down and are carried on in the blood stream until they become lodged in some distant blood channel and set up new seats of suppuration. If the invading microbe is weak and the resistance of the leucocytes potent, such clot may remain circumscribed or be absorbed, but if the opposite conditions be present, namely, potent and numerous microbes, with abundant and effective toxins, the disposition is to a continuance of the infection and acute febrile pyæmia.

The mere presence of pus microbes or their products in the blood does not determine pyæmia ; a modification of the intima of the vessel leading to local infections with the surely following thrombosis and embolism. The original lesion may be a trauma as from a bruise, puncture, operation, ligature, or extension of a disease process, as in phlebitis.

The seat of secondary abscesses depends primarily on the location of the original suppurative centre, as such centres are most commonly in the systemic circulation. The lungs are commonly attacked. When the primary infection comes from

the chylo-poietic viscera, the liver shows the first secondary abscesses and it is not an uncommon thing on post-mortem inspection to find the livers of cattle, complete masses of secondary abscesses, and the carcass otherwise free. If the uterus be the seat of the primary infection, it is not uncommon to find metastatic abscesses upon the abdominal walls. When the lungs are the primary seat, the great flow of blood through the kidneys renders them especially liable to become the secondary foci of suppuration.

*Symptoms.*—The formation of secondary abscesses is usually marked by violent rigor, lasting from a few minutes to an hour, and repeated at regular intervals, which serves to distinguish it from septicæmia. Temperature rises with the chill, 102-105, but shows marked remissions in the morning, when it may be normal, again rising on the ushering in of the chill; pulse increased in frequency, soft and compressible; remissions may be attended by profuse perspiration. Advanced stages are accompanied by diarrhœa, blood passed with fæces if intestinal abscesses be present. Albumen and pus corpuscles passed with the urine denotes suppurating foci in kidneys. There is cough and dyspnœa when the lungs are attacked, the animal is dull and cardiac murmur may be present if the lining membrane of the heart be attacked; stupor, coma and paralysis if the brain or meninges be attacked. In case of a trauma the evidence of a thrombus in one or more veins leading out from the wound.

The prognosis is always grave in the acute type, in chronic forms not so unfavorable. Animals may live for a long time and even ultimately recover, as is shown in post-mortem meat inspection. A large number of animals slaughtered show lesions of chronic forms of pyæmia and yet the animals are otherwise in a healthy condition.

*Lesions.*—The blood retains its normal bright red color and clots firmly, contrary to the condition in septicæmia; the spleen is often the seat of small abscesses; the liver may contain small abscesses, or the organ becomes nearly a complete mass of abscesses; the peritoneum may be studded with suppurating foci;

abscesses are found in the lungs and kidneys. If infection follow castration, the diseased process may follow the line of the spermatic cord into the abdominal cavity and involve the peritoneum and any of the contained organs. Ulcerative endocarditis may be present with coagula on the valves of the heart. If the attack be acute and results from a trauma, embolism may be present at the different suppurating centres. The abscesses are usually smaller and more numerous in the acute than in the chronic forms.

*Disposal of the Meat of Pyæmic Carcasses.*—If the disorder be an acute infection and extensive or generalized, the carcass should be condemned. Should the disease be chronic and the metastatic abscesses be few in number and encapsulated, there is no reason why the meat should not be passed for food, after the removal of the diseased areas.

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THE regents of the University of Minnesota have recently made provision for an assistant to Dr. M. H. Reynolds, to begin work October 1st. The assistant will be a graduate and assist with the teaching and experimental work.

THE recently inaugurated branch of the Bureau of Animal Industry at Fort Worth, Texas, comprises the following meat inspectors: H. D. Paxson (in charge), Elisha Myer, John H. Lowe, Walter C. Bower, and Stephen L. Blount.

A JERSEY COW, the property of John D. Rockefeller, at Tarrytown, N. Y., and valued at \$20,000, has been suffering from what the lay press calls a "mysterious sickness." He has had about one dozen New York City veterinarians in consultation, as well as Profs. Law and Moore, of Ithaca. The diagnosis is not stated. We trust that some of the veterinarians connected with the case will give REVIEW readers a full account of the distinguished patient.

CITY PRACTITIONERS desiring a day's outing and an opportunity of visiting the United States Animal Quarantine Station for the Port of New York, should attend the forthcoming meeting of the Veterinary Medical Association of New Jersey at Athenia (near Paterson) on Thursday, July 9th. Athenia is only about half an hour's ride from New York. Take either the Erie R. R. (Newark and Paterson Branch) or the D. L. & W. R. R. from Hoboken (Paterson and Boonton Branch) to Athenia.

## CONGENITAL CONTRACTION OF THE EXTENSORS IN THE HORSE.

BY H. A. VERMEULEN.

*Translated and Abstracted from Tijdschrift voor Veeartsenijkunde*  
(Vol. XXX, No. I.)

BY L. VAN ES, M. D., V. S., AGRICULTURAL COLLEGE, N. D.

While there is a great deal of literature on the congenital contraction of the flexors and its treatment, little has been said on the shortening of their antagonists.

This contraction is by no means rare and cases should find their way more frequently into the veterinary journals.

The abnormality is most often seen in the fore legs, but is also met with in the posterior extremities.

The contraction is first recognized when the colt succeeds in getting up for the first time. It supports itself entirely on the distal extremities of the canons, while the phalanges are turned forward in a horizontal direction, or in very pronounced cases are turned upward. Canon and pastern form an angle of  $90^{\circ}$  or less.

The act of bringing the limb in a normal position is extremely difficult and very painful to the patient. When this is attempted the extensor tendon becomes very prominent from the lower third of the canon to the lower portion of the pastern. The posterior part of the fetlock soon becomes abraded.

Prognosis is always favorable when the front legs are involved and quite doubtful when the contraction occurs behind.

Treatment must be undertaken before the articulations accommodate themselves to the abnormal position of the bones.

The treatment is very tedious and lasts about two months, while decubitus cannot be prevented.

The means for relief adopted consists of bandaging. After a suitable padding is put in place a splint bandage is so adjusted that the fetlock is fixed, canon and pastern forming a straight line. The bandage is changed every two days.

In most cases the splints had to be discarded in from 8 to 14 days on account of decubitus.

The patient is sustained by a highly nutritious diet and is given plenty of fresh air.

In 4 to 6 weeks it is noticed that the colt makes an attempt at putting its feet down. When it succeeds, the bandages are discontinued and the patient turned to pasture, where the cure is soon completed.

The reviewer, who never met this condition while in practice, wonders if a tenotomy, aseptically performed, would not favorably affect the duration of the treatment.

### PERITONEAL FILARIASIS IN THE HORSE.

BY JOHN J. REPP, V. M. D., AMES, IOWA.

I have frequently observed in the peritoneal cavity of horses in Iowa a nematode worm about as thick as a knitting needle and two to six inches in length, with the tail disposed in a spiral manner. My observations have extended over horses varying in age from one to thirteen years. The worms have never in my experience been in great numbers, such as described by MacGillivray, nor have I ever been able to trace evil effects to them. Recently I have identified this worm as the *Filaria equina* Abildgaard (*Filaria papillosa* Rudolphi).

Neuman gives the following description:

"Body long, filiform, white, attenuated at both ends, and especially behind. Mouth small, and provided with a chitinous infundibuliform ring, the border of which is divided into four rounded and salient papillæ; outside this ring are other four submedian papillæ in the form of spinules. *Male*, 6 cm. to 8 cm. long; tail curved in a spiral manner, and having eight papillæ on each side, of which there are four pre-anal and four post-anal; two unequal spiculæ enveloped in a transparent sheath. *Female*, 9 cm. to 15 cm. long; tail slightly spiral, and terminated in a papilla preceded by two others. Vulva situated near the anterior extremity. Ovoviviparous."

These worms frequently occupy the tunica vaginalis along with the testicle and come out through the incision when cas-

tration is being performed. Their presence is recorded in the pleural sac, arachnoid space, subperitoneal connective tissue, and in the substance of the diaphragm, but I have never met with them in any of these positions.

A REMARKABLE DOG.—*Mamaroneck, N. Y., April 24.*—Bowlegged Jack, a bulldog who for many years did police duty for the village of Mamaroneck and won fame by capturing burglars, giving the alarm in case of fire, and rescuing children from drowning, was buried to-day. His funeral, which was held at the home of his owner, former Postmaster Fairchild, was the largest ever given to a dog in this town. A score of villagers and children attended, and placed wreaths and flowers on the grave of the faithful dog. Several of the children whose lives had been saved by the dog shed tears. Bowlegged Jack, was known to every person in the town. He first made his appearance in Mamaroneck ten years ago as a tramp. Mr. Fairchild found him shivering on the town dock, lean from hunger and exposure, and took him home. The animal showed his friendship in a valuable manner a year or two later by saving the life of Mr. Fairchild's youngest son, who, while bathing waded out beyond his depth and was sinking, when "Jack" heard his cries and plunged in and brought him ashore. He also rescued two other boys and a little girl who fell into the Sound. In the daytime Jack usually slept at Oliver's Hotel, behind the stove, and he got his meals at the Richbell Inn. His chief delight was to accompany the village police on their rounds and in ten years he was never absent from duty. He would run ahead of the police and scour the alleys and dark places and if he found anyone there would bark. A few years ago he discovered a strange man lurking in the darkness in the rear of the Mamaroneck Bank, who started to run, but the dog caught and held him. The stranger who proved to be a burglar, pulled out a "jimmy" and attempted to beat Jack off, but the animal clung to him until a policeman appeared and took him to the station. The prisoner had a "jimmy" and dark lantern and was held for attempted burglary. On several occasions Jack discovered buildings on fire and saved lives of occupants by barking. Jack continued to do police duty until two years ago, when the uniformed police force was appointed. After they appeared in uniform he took a dislike to them and refused to patrol their posts. His death was caused by a battle with a big rat which bit Jack on the jaw, blood poisoning setting in.—(*N. Y. Herald.*)

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## LAMINITIS.

BY DR. JAMES J. JOY, DETROIT, MICH.

Read before the Michigan State Veterinary Medical Association, at Lansing, Feb. 3-4,  
1903.

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In presenting to you this short treatise on laminitis, I do not profess to have anything new to offer either on the pathology of the disease or its treatment. I intend to deal with the after-effects of the disease as we find them in some cases. Laminitis is an inflammation of the sensitive laminae or pododerm, more often found in the fore than in the hind feet, and its location is generally around the toe or anterior portion of the wall, where, owing to the congestion and resulting inflammation, the sensitive and horny laminae become torn apart and the pedal bone, being deprived of a part of its support, drops downward and forward, the coronet dropping in at the toe; the quarters become raised; we have rings forming around the external part of the hoof, and, owing to the inflammation, we have the structure of the white line breaking down and crumbling away, leaving in many cases a condition known as "seedy-toe." In still other cases we have such a change in the position of the bones of the foot that they force the sole downward until it is in many cases higher than the surrounding wall. We have a change in the horse's method of traveling. In many cases we find the animal placing the heels to the ground first. Of course, all of these conditions are found after the acute stage has passed, and then only when the cases have resisted treatment or have had no treatment.

Now, regarding the treatment of such cases as I have mentioned, I find that by assisting nature by keeping the foot in nearly as natural a shape as is possible, and the application of easy-fitting shoes, with the object in view of relieving pressure on the affected parts, we are enabled to render the animal serviceable if we cannot restore him to a perfectly sound condition.

## REPORTS OF CASES.

*"Careful observation makes a skillful practitioner, but his skill dies with him. By recording his observations, he adds to the knowledge of his profession, and assists by his facts in building up the solid edifice of pathological science."*

### CASES OCCURRING IN PRACTICE.\*

By Drs. MUIR and ELZINGA, Grand Rapids, Mich.

We propose in this paper to give you the history of a few cases that occurred in our practice during the last year, in Grand Rapids.

#### *Fracture of the Humerus in Both Legs of a Horse.*

The first case was that of a fracture of the os humeri in both limbs in a six-year-old harness horse, for which no cause can be assigned. The horse belonged to a string butcher living about seven miles from the city. The butcher had not had the horse in his possession very long. He was a little lame when bought, but was driven the day before, and had apparently got over his lameness. In the morning he was hitched to a light double wagon to take meat to town. He came to town without showing any signs of lameness, was stopped about fifteen minutes to deliver meat and, on being asked to go on, could hardly manage to move, but as he went he seemed to get better; after the next stop he was worse than before. The owner drove him to a shop to have his feet attended to. There he was shod, and with difficulty was moved to a livery barn. When we were called to see him we called it shoulder lameness and did not suspect fracture at this time. After being moved a little, he would walk a good deal better, and would lie down and get up again without any difficulty. About a week afterwards he was found with the bones displaced in one leg, and was shot. Post-mortem: Comminuted fracture of both humeri. From the appearance of the bones the fractures were about a week old. The owner is an intelligent and reliable man and could not account for the fractures in any way.

#### *Another Rare Shoulder Lesion.*

About the same time we had a draught mare, six or seven years old, belonging to the Columbia Transfer Co. She worked in a double team all forenoon and was put in the stable to feed at noon apparently all right; but when the teamster attempted

\*Read before the Michigan State Veterinary Medical Association, at Lansing, Feb. 3-4, 1903.

to get her out at 1 o'clock he could not back her out of the stall. She was very lame in the left fore leg, and with difficulty was put in a box stall. When we were called in, the shoulder was swollen and sore, and a slight sound like crepitus could be heard. Fracture was suspected, but we ordered the mare left as she was until fully satisfied. The shoulder and both front legs swelled badly, and in about three weeks, as she was in a bad way, we ordered her destroyed. Post-mortem: The ligaments were torn away from the bones at the joints, part of the bone coming with them. There seemed to be a degenerated condition of the bones at the joints, and a quantity of pus in the shoulder, elbow and knee joints of the left leg; also the same appearances in the right knee. The mare was well and healthy until that day at noon.

*A Fractured Ilium Punctures the Vagina.*

The owner of the first horse had another experience that was rather curious. We were called to his place to see a mare that was bleeding from the vagina. On making an examination, we found a punctured wound on the left side of the vagina about two inches inside. On exploring the wound we found the ischium was fractured and had punctured the vagina. The mare had lost considerable blood and could not stand up. The wound was washed out, and packed with cotton to stop the hæmorrhage, and the wound stitched to prevent the cotton from working out. The cotton was removed after several days, a dependent orifice made, the wound washed thoroughly, dressed with antiseptics, and at last accounts the mare was doing well. A peculiar thing about this case was that although the bone was fractured the mare walked without showing much if any lameness.

*Intestinal Cases.*

We will now give the history of three cases of bowel trouble, which show the advantage of making a post-mortem examination in cases of this kind, both for our own satisfaction and that of the owner.

The first case was that of a grey mare, belonging to one of the express companies. This mare had several attacks of azoturia, and at this time had been laid up with a puncture in the foot. She was put to work and brought in with azoturia; was treated and given a physic pill, and at night was doing well. Afternoon next day we were called to see her as she seemed uneasy. As the pulse was only 48 we told the stableman that it was the pill griping her. An hour or two later the pulse

had dropped to 44, and the mare seemed better. At night we were called to see her again, and we found things were not going right; her pulse accelerated, and she was very uneasy. We treated her all night, and the next day we came to the conclusion she had a twist in some part of her intestines, as she passed neither gas nor fæces. She died the following day. Post-mortem: The double colon was twisted or turned on itself at the anterior or diaphragmatic flexure, making a complete closure of the bowel at this place. The bowel anterior to this place was completely filled with soft material, showing that the physic had operated all right. From the twist to the rectum the bowels were entirely empty.

A black gelding belonging to the city was brought to our place one morning by the driver, who said his horse was acting strangely, uneasy, and protruding his rectum through the anus. The protruded portion was badly inflamed and swollen. On examination per rectum, about eighteen inches from the anus, we found what seemed to be a twist of the bowel. One finger could be partly worked around the twist and balls of fæces pulled away. The horse had strained so much that the other bowels were pressed back and jammed into the pelvic cavity. The horse was cast and rolled over, but owing to the other bowels being jammed so tightly in the pelvic cavity, the twist could not be reduced. Post-mortem: Twist of the rectum. The only way this could have been helped was to have hung the horse up by the heels and allowed the bowels to fall forward.

We were called to see an aged harness mare one morning. The liveryman found her sick about five o'clock and gave her some stable remedy, but soon made up his mind he had a very sick mare on his hands. When we saw the mare she was in a great deal of pain, pulse 80, breathing fast, membranes highly injected. Nothing passed the mare all day, the rectum being completely empty all that day and the next night. We told the owner that she probably had a twist or some obstruction of the bowels. On going to the stable the next morning the owner was there, and the liveryman told us she was better, but an examination soon dispelled that illusion; she died soon afterwards. I may mention that on pressing under the left flank she seemed to be sore and tender. As someone had driven the mare the night before without the owner's consent, a post-mortem was ordered, when, to our satisfaction, the following lesions were found: the spleen was partly torn away from the stomach, and through the opening thus formed almost the entire ilium had

passed, and became strangulated. The strangulated part was gorged with blood and on the left flank, where we had found so much pain on external pressure, the muscles and peritoneum were torn.

We took care that the owners should see those post-mortems, and they were entirely satisfied that all had been done for their animals that could have been done. But if the post-mortems had not borne out the diagnosis it might have been different.

EMBOLISM OF THE PULMONARY ARTERY IN A HORSE.\*

By J. W. SCOTT, V. S. Manchester, Ia.

I will report to you a case which I diagnosed to be "Embolism of the Pulmonary Artery," but which has not been proven by post-mortem, as the animal, a bay mare, about eight years old, is still alive and in the same condition as when I saw her last August. The early history of the case which I obtained from the owner showed that the animal had been healthy until some time during the late winter or early spring of 1902, when she commenced to show symptoms of weakness and dyspnoea when at work or moving rapidly. These symptoms were not apparent if the animal was allowed to stand. Her appetite was normal and all the organs of excretion and secretion were normal. Her condition was attributed to the fact that she was heavy with foal, but this was disproven when parturition occurred. Her condition remained unchanged and she was kept in the pasture until an opportunity came to dispose of her.

Her owner at the time of my examination got her in a trade some two weeks prior, and he informed me that as he drove out of the town toward his home, which was about four miles distant, the animal showed symptoms of falling. These symptoms were speedily developed into fact, for before he could unhitch from his vehicle the animal was floundering on the ground fighting for breath and was as he supposed in her death agony, from which it took about fifteen minutes to recover sufficiently to regain her feet. After resting for an hour he rode her slowly to his home and turned her to pasture where she remained without further incident until the day I was called in to examine her.

Examination conducted in the field revealed no indication of disease, the pulse, respiration, and temperature, all being normal. She was then haltered and led at a sharp trot for about

\* Read before the 15th Annual Meeting of the Iowa State Veterinary Medical Association, January, 1903.

one hundred yards, which occasioned some excitement, the breathing being rapid and tumultuous. We then harnessed her, being careful to select a good fitting collar which could in no way interfere with breathing or the free passage of blood in the jugular veins, and hitched her with another animal to an empty wagon. We started at a slow pace toward the road, which was not more than sixty yards distant. By the time we reached the gate she commenced to stagger and the driver stopped. She was quite excited, the mucous membranes were cyanotic and the breathing stertorous. The submaxillary artery was full but pulsation was feeble. She recovered her composure very quickly. I then instructed the driver to go ahead and keep going till I asked him to stop. After going about one hundred yards I judged from the character of her breathing, which was loud and hoarse, and the excited manner in which she threw her head from side to side, that she had about reached the limit of exertion to which she could be safely subjected, so we stopped, and with her struggling and surging and dashing the head wildly about we managed to get her unhitched from the wagon, but before we could remove the harness she fell to the ground gasping for breath and giving evidence of the greatest distress. This agitated condition was of such long duration and of such severity that recovery seemed doubtful, and her efforts were so violent that I could not make any examination at this time, but, as the more furious symptoms subsided, I approached and felt for her pulse. The artery was full but motionless, the mouth and nasal membranes of a leaden color and circulation was to all appearances completely stagnated. I placed my finger on the jugular and made an unsuccessful effort to raise the vessel. It was almost half an hour before she was able to regain a standing posture and was not wholly recovered when I came away about one hour later.

What pathological state would be most likely to call forth these symptoms? That the trouble was one of circulation I felt well assured, and that it was thrombosis or embolism of some important vessel appeared to be the only rational conclusion. After mature deliberation I pronounced it to be embolism of the pulmonary artery and will give my reasons for believing that this diagnosis was correct. The common aorta and the pulmonary artery are the only vessels in the body which carry the whole volume of the blood. The latter leaves the right ventricle and proceeds to the upper level of the auricle, then backward a short distance, the entire length of the vessel

being four or five inches. Here it divides into right and left branches, each of which conveys the blood to its respective lung. It is now returned to the left heart by the pulmonary veins and the whole volume is forced by the contraction of the left ventricle through the common aorta. Occlusion of either of these vessels would cause a complete stagnation of the whole circulatory system and would consequently occasion just such symptoms as those I have described, and, if continued for any length of time, death would be the result. Therefore occlusion could not have been complete in this case. Why should those symptoms be seen only when the animal is subjected to exertion? This is a question to which a conjectural answer must be given, and in answering I make use of a theory which explains this, also why it is most likely that the impediment was in the pulmonary artery. I will first call your attention to the difference between a thrombus and an embolus. A thrombus is an obstruction to a vessel by a clot which is adherent to the vessel's wall and consequently stationary. An embolus is a clot floating in the blood stream and may not occasion any great hindrance to the blood flow unless forced along into a narrow part of the vessel, where it may completely plug it. Now, it is evident that if the difficulty was due to thrombosis the distressing symptoms would have been constant, as any obstruction remaining at the site of formation would interfere with the blood flow to almost the same extent during the period of rest that it would when at work. This is not the case in embolic obstruction, as the symptoms are aggravated when the clot reaches a narrow part of the vessel. In the case under consideration, when the animal is exercising the blood moves in the aorta with more force, and as a consequence the obstructing mass is pushed along to the bifurcation of the artery and lodges there, producing obstruction and rendering the whole circulatory system inactive.

During quiescence of the animal the embolus becomes lodged in the widest part of the dilated artery and equilibrium is restored.

But what distinguishing symptoms would be presented if the obstruction were in the systemic aorta? The answer must be conjectural and is based upon our knowledge of the anatomy of the heart. The walls of the left ventricle are of about three times the thickness of the right and have a contractile power proportionately greater, which drives the blood with such force through the aorta that were an embolus contained therein it would be

forced to the juncture of the posterior and the anterior aorta, from which place it could not recede, and the symptoms would be continuous until the heart, now distended with blood and wholly powerless to urge it past the obstruction, would cease its efforts, death occurring in a few minutes after the first indication of distress.

#### DISCUSSION.

*Dr. Heck* said he had a case which resembled this somewhat and that he had made a diagnosis of spasm of the glottis.

*Dr. Walrod* said he thought *Dr. Scott's* case might be one of arterio-sclerosis of the large arteries.

*Dr. Repp* said he would expect to find at autopsy either thrombosis alone or aneurism combined with thrombosis in one of the large arteries near the heart. The appearance of the trouble on exercise could be explained by the fact that the demand upon the circulation was greatest at such times, while when the animal was at rest the demand could be supplied notwithstanding the obstruction.

*Dr. Simpson* mentioned two cases in horses in which there were heart murmurs, but he did not ascertain their exact nature.

#### THE SERUM TREATMENT IN PURPURA HÆMORRHAGICA.\*

By J. H. McLEOD, D. V. S., Charles City, Iowa.

I cannot recommend as yet the serum treatment in purpura hæmorrhagica. However, I can inform you just how far I have gone and the results I have had with this serum.

*Case I.*—Bay horse, driver. The disease developed in a mild form and was doing very well under my usual treatment of stimulants and tonics, but after the fifth day, with the owner's urging, I used the antistreptococcus serum in dose of 30 c.c. The horse was a small driver and I thought this dose enough to start on. It was not necessary to repeat. The horse got along well and made a splendid recovery. No microscopical examination was made in this case, as the symptoms were not grave enough to warrant anything of the kind.

*Case II.*—Almost similar to the former, a well developed case of purpura, which yielded readily to the serum in doses of 40 c.c. repeated twice.

*Case III.*—Called to treat Nov. 17th, 1902, a large draught gelding. Temperature 105°, pulse 90, and respiration about

\*Read before the 15th Annual Meeting of the Iowa State Veterinary Medical Association, January, 1903.

20. On being moved was stiff all over and did not care to move unless disturbed, but stood quite still or shifted uneasily on his legs. Very large swelling on back and medium sized to small on the breast, abdomen and groin. Mucous membranes blanched with occasional patches of ecchymosis. I promptly informed the owners that the horse would most likely die, but commenced to treat the patient immediately with stimulants and tonics and advised the use of the antistreptococcus serum if the price was no object. Injected 40 c.c. the following day at noon, although in the meantime the symptoms had improved since the previous day. The stiffness had lessened considerably, mucous membranes highly injected and the hæmorrhagic spots more typical and plainly visible. The following day: Temperature is normal, pulse is 60 and stronger, the swellings have almost disappeared, the animal is bright, and the prospect good for recovery. Next day the animal was improving, and, contrary to my advice, was allowed his liberty and he even played around out doors. Friday morning the animal was worse again, stiff in hind quarters, more swelling in groin with straddling gait, groaned and seemed in considerable pain at times; patches on mucous membranes gone. The symptoms got gradually worse as the day wore on. Later he was removed into a box stall, where he cast himself. When relieved, on attempting to rise, could not do so. One hour later he got on his feet, but his hind legs refused to support his weight. He had now all the symptoms of azoturia. I passed the catheter and found the urine nearly normal in color but of higher specific gravity. The prognosis was now very unfavorable. Next morning I could plainly see that the end was near. The attendant informed me that he had passed a large quantity of bloody urine, but he did not save any for my inspection.

As far as the serum treatment in this case is concerned I consider it eminently successful, in fact more so than in the previous cases, as it was of a much graver nature.

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WHAT IS IT?\*

By DR. I. A. WYNN, Kenton, O.

I suppose you have all been up against it, as I now am, and have wondered "what is it?" How shall I treat it? What shall I tell the owner? And am I safe in making him any promises?

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\* Read before the Ohio State Veterinary Medical Association, January, 1903.

*Case I.*—On July 25th, about noon, I was called one mile west of town to see a two-year-old colt that was down in the pasture. They told me that at 9 A. M. it was up and appeared to be all right. Upon examination found temperature and pulse about normal, respiration slightly accelerated, due to the colt trying to get up. The colt was unable to get up or stand after being helped up. I could find no indication of soreness any place. I put it in the swing, but it could not stand, and seemed to be in great pain while in the swing. As I did not know what the trouble was, I did what any of us would do—gave what remedies I had at hand that were best calculated to relieve the symptoms—used liniments over the back and gave belladonna and cannabis indica. On the 29th, the colt was still down. I put it in the swing; it did not evince as much pain as it had before. Kept it up part of the time. I heard from it every day or two, but did not see it again until the 15th of November. It could then walk around, but had a staggering gait. The owner reported last week that it was improving, but slowly.

*Case II.*—Aug. 8th I was called ten miles west of town to see an eight-year-old horse. They had turned him out the evening before and he was all right and played. In the morning they found him down, but he got up with help. He could hardly walk and fell twice while being taken to the barn, a distance of about ten rods. I saw him at noon. He stood with his feet apart in a braced position, and was eating. Respiration, temperature, and pulse were normal. One side of the neck was swollen, but not sore. I prescribed bathing the neck with hot water and liniment, and gave nitrate potassium. On Dec. 1st he was not much better.

*Case III* was a horse that had had poll-evil last spring. In October they found him in the pasture staggering around. When the owner went up to him he fell, but could get up without assistance. The owner came to me and described the above case, but as he was not a valuable horse I did not go to see him. He could eat all right, but staggered around for three weeks. One morning they found him dead in the pasture. He had evidently fallen dead off his feet as there was no evidence of a struggle.

*Case IV.*—On Nov. 25th I was called four miles east of town to see an old horse that could not get out of the stable. I found him with his head resting on the manger, and was told that he stood that way most of the time, but staggered when moved. He had a good appetite. They informed me that he had been this way about six weeks before, and that they had given him a

physic and tonic, and he had improved for a short time, but was soon as bad as ever. His temperature and pulse were normal. I gave him a tonic of nux, arsenic and gentian. On Saturday, Jan. 3, the owner drove him to town and when he started home his horse could not go. I was called, and when I tried to move him he could go straight, but if turned he would stagger and almost fall, and he could not stand still without leaning against something. I took him to my barn, and he began at once to eat as though nothing was wrong. I gave him nux, and the next morning the owner took him home. On Tuesday the owner reported him not much better, but feeling good. When he turned him out he rolled and got up, shook himself and went off eating.

#### A CASE OF TRAUMATIC PERICARDITIS IN THE COW.

By Dr. WM. J. REAGAN, Paterson, N. J.

Reported to the Passaic County Veterinary Medical Association at Paterson, N. J., May 5th, 1903.

On April 22d I was requested by Mr. Chittenden, of Bal-lair, Bergen County, to make a post-mortem examination of a two-year-old heifer which he informed me was found dead in the stable that same morning. I went over to the premises, the farm of a Mr. Garrison, on the river road, and found the animal in question lying on her side against the side of the stall with her head toward the door. The position of the carcass, with its condition, and the fact that the litter was not at all disturbed, as it would have been had the animal suffered long, convinced me that she had died suddenly, and as the carcass showed that she had not been affected with any acute or chronic disease, I told Mr. Chittenden that in my opinion she had died of traumatic pericarditis due to puncture of the pericardium and heart by a foreign body, a nail, hair-pin, piece of wire or needle. I stated that she might have been poisoned by some weed in her pasturing place, but after examining the place in question where she had been staked out, and finding nothing of a poisonous nature as far as I could judge except some daffodils, which while poisonous are not so poisonous as to cause such sudden results, and taking into consideration the fact that she had been eating them off and on for the last two weeks, I gave as my opinion that they did not cause her death, and that I still judged that she had died from traumatic pericarditis.

On post-mortem found everything perfectly normal and healthy except the pericardium and heart. The pericardium showed a punctured wound on its posterior face, through which

protruded the metal portion of one of those short black-headed hat-pins which ladies use to fasten their hats on. On the posterior face of the right ventricle there was a jagged lacerated wound, which penetrated into the cavity of the ventricle; this wound showed distinctly how the point of the pin at each beat of the heart had lacerated the muscular fibres till it finally wore them through. The pin had evidently passed through the walls of the omasum, as I found it sticking through the anterior wall of that organ. Inside the pericardium was an enormous blood clot. On exploring farther I found the head of the pin, which had become detached from the metal portion inside of the abomasum or true stomach. This fact showed that the pin had been swallowed only a few days before, as otherwise the rounded head would have passed out of the digestive tract with the fæces. The history of this case was brief. The owner stated that for two days previous to her death she had bellowed in a peculiar way and would butt the feed pail over and also other objects. At times this behavior was thought due to sexual excitement or rutting. This bellowing was evidently due to the pain produced by the passage of the pin through the organs involved.

#### THREE CASES OF CHOKING.

By WM. SCHUMACHER, M. D. V., Milwaukee, Wis.

A gray horse apparently took sick during the night, broke down its stall, knocked out a door, broke through the ice of a ditch and was found there by its owner next morning. On arrival, diagnosed thoracic choke, ascertained that the horse could not swallow anything; gave morphine and atropine hypodermically to relieve the spasms, and a grave prognosis. The animal died next morning, and on post-mortem found no obstruction or dilatation of the oesophagus, but a ball of worms the size of a fist in the pyloric orifice of the stomach; the latter contained partly digested food and was of normal size.

A bay horse, after being hitched and checked up, was given half an apple by a child. Driven a short distance, he took sick and was taken home. On arrival, found the horse bloated to the utmost, and used at once the trocar. Diagnosis, thoracic choke. The animal was in great distress; was reaching and swallowing air all the time. Drenched with some water and found it would pass. Gave one pint of ol. lini to lubricate, and used the trocar repeatedly on both sides to relieve the tympanites. Finally the horse became very violent, kicked and threw

himself, and even repeated doses of morphine and atropine would not quiet him. Emptying the rectum and clysters did not give any relief; the bloating and the swallowing of air kept up. As a last resort, gave  $2\frac{1}{2}$  grains of eserine sulphate (the large dose on account of the morphine and atropine he had received), whereupon the horse passed some fæces and flatus and subdued the tympanites somewhat. Gave again one pint of ol. lini and one ounce of spts. ammon. arom., but the swallowing of air and the distress was the same as before. Finally gave some more ol. lini and spts. ammon. arom. and another  $2\frac{1}{2}$  grains of eserine (three hours after the first dose). A few minutes later the horse passed flatus very violently, the reaching, swallowing and tympanites diminished gradually and by and by the horse became well.

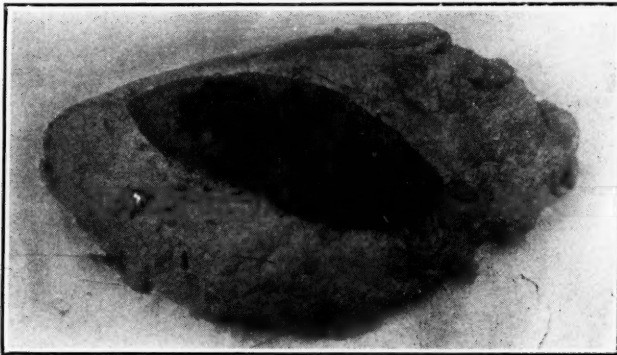
A large draft horse took sick and the stable boss administered a ball of his own concoction, which probably was too large and hard from age. The horse acted strangely, so the doctor was called, and found the patient rolling, kicking and shaking his head; pulse and membranes not abnormal, peristalsis increased. Gave a capsule of spts. ammon. arom., and while waiting for its passing down noticed antiperistalsis. The capsule would pass up and down the œsophagus; by and by the animal cried out with pain, doubled up and made violent efforts to vomit. Upon inquiry the stable boss admitted that he had given a ball and that the animal acted very strangely afterwards. Gave a dose of morphine and atropine, and the horse gradually became quiet; laid down, but kept on shaking the head and trying to vomit. Emptied rectum and bladder, gave clysters, and finally 1 grain of arecoline hydrobromate, which brought on profuse salivation. One hour later another  $\frac{1}{2}$  grain of arecoline was given, whereupon the bowels evacuated and the symptoms of choking disappeared.

#### LIPOMA OF A HORSE.

By JOHN J. REPP, V. M. D., Ames, Iowa.

On March 30, 1900, a sorrel carriage gelding, eight years old, was brought to my clinic at the Veterinary Hospital, Iowa State College, to be treated for a swelling over the external face of the right anterior crural region which had been developing for a year. I found a smooth, flat, tumor nearly a foot in diameter. It was not attached to the skin, but the skin showed some scars which resulted either from ulceration or from attempts at treatment. The tumor was not prominent when the

horse was standing, but, when he flexed the leg in advancing, it became quite prominent when seen from the driver's seat, and on account of its unsightliness the owner wished to have it removed. The horse was cast on the grass and anæsthetized with chloroform. The hair was shaved over the tumor and the site washed with 5% carbolic acid solution. With a convex bistoury an elliptical incision was made to enclose a space 8 inches long and 4 inches wide. The tumor was then dissected from the skin and the underlying tissues, to which it was loosely attached, and removed. The tumor was circular in outline, about 10 inches in diameter, 3 inches thick in the centre, and tapering to a very thin periphery. Its weight was 4 lbs. 8 oz. It showed the characteristic lipomatous structure throughout, not being mixed with any other kind of tumor tissue. There was a well-developed reticulum of connective tissue enclosing lobules of adipose tissue  $\frac{1}{8}$  to  $\frac{1}{2}$  inch in diameter. It imparted an oily sensation to the hands and the knife used in cutting it was smeared with grease. These latter features will always enable one to recognize a lipoma. The accompanying figure rep-



resents one-half of the tumor and shows the elliptical piece of skin which was removed with it. The photograph was made after the specimen had been kept in formaldehyde for several years.

On account of the large cavity resulting from removal of the tumor healing progressed slowly but uninterruptedly under daily washing with a disinfecting solution, until, finally, the wound closed up in such a manner as to leave only a small cicatrix to indicate that the locality had been the seat of a tumor.

## PARTURIENT PARESIS.

By A. W. BAKER, V. S., Brasher Falls, N. Y.

I have noticed in the REVIEW several times articles from different veterinarians as to their treatment and success with "milk fever." I have had several cases this spring and I have used the following treatment in three of them with excellent results:

One case in particular, of recent date, was a valuable Holstein cow and highly prized by the owner. On April 23, at 9 A. M., the owner came to my office, stating the case, and had very little hopes of a recovery, as he said he had seen, and also had had some cases treated, but with poor results; but, however, he requested that I should go and do what I could. The animal was a very large one, and was apparently suffering a great deal, being very restless.

*Symptoms.*—Moaning, inappetence, mental dullness, coma, paralysis; temperature 97°, pulse 120 (also venous pulse), respiration 28, with all the usual symptoms of the disease.

*Modus Operandi.*—I made an examination, and found the bladder and rectum full; so emptied them, which apparently gave some relief. Found she was unable to swallow. We gave her as clean a place and as good care as was available. Then gave the following

*Treatment.*—Magnesia sulph., lb. i; aquæ, ad. litres ii. Injected through œsophagus. I then gave the following injection in the udder through each teat: Potass. iodide, 3 iv; creolin, fl. 3 ss; aquæ ad. (warm) fl. 3 x, every 8 hours, with frequent rubbing of the udder and removing the milk; also any manipulations of benefit. When finished, I gave a stimulant of the following: Fl. ex. nucis vomicæ and fl. ex. belladonna, āā 3 ss; ammonia aromatic spr., 3 iss; aquæ, ad. 3 xv; two tablespoonfuls every two hours injected in mouth. Supply laxative food.

From 5 P. M. and up to 12 P. M. not much change, but at 2 A. M. she got on her feet. I again visited her in 24 hours and found her convalescing, and at present writing she is as well as ever.

## RESULTS OF FOUR OPERATIONS FOR CRIBBING.\*

By J. H. McLEOD, D. V. S., Charles City, Iowa.

*Case I.*—Chestnut gelding, trotter. The operation consisted of section of the sterno-maxillaris below where it receives the

\* Read before the 15th Annual Meeting of the Iowa State Veterinary Medical Association, January, 1903.

spinal accessory; also resection of the sterno-hyo-thyroid muscles. This animal made a few unsuccessful attempts after the operation but gave it up for a time.

*Case II.*—Brown draught stallion. Operation: Neurectomy of the spinal accessory; unsuccessful. The owner, however, informs me that he only cribs about half as much and that his general condition has improved very much.

*Case III.*—Black Percheron stallion. Operation: Section of the sterno-hyo-thyroid and resection of the spinal accessory; partially successful. The animal attempted the act immediately after the operation, but failed. After three days I found him at times with his mouth held fast to a plank, which he could let go with difficulty. Advised his removal into another stall. This horse was worse when being watched, and at that time next day he performed the act successfully. I ordered his removal into a stall where he could not get hold of anything, and he has not been known to crib since.

*Case IV.*—Operation same as previous case; successful.

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#### DOG CHOKED ON FROZEN TALLOW.

By FRANCIS ABELE, V. S., Quincy, Mass.

Held post-mortem on Boston terrier, valued at about one thousand dollars. Had been let out for exercise at night-fall; did not return; neighbor came over in morning saying: "Swill man had come in to ask if we wanted the dead dog in swill-tub taken off." They found owner's name on collar and notified him. Dog was frozen stiff; mouth and fauces were choked with a mass of frozen tallow. Dog probably could make no outcry and must have died quickly.

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#### FOREIGN BODY IN CHEEK OF HORSE.

By FRANCIS ABELE, V. S., Quincy, Mass.

Horse had fistulous opening on outside of cheek and small one opposite on inside. Had been cast, and broke iron fittings to stall. The owner thought that there was a piece of iron in the cheek. Bone forceps were employed and they produced a pyramidal piece of tooth, which proved to be the "hook" of the first superior molar. It must have been one inch long and almost half an inch at base lines. From close questioning and from the condition of the parts it was evident that this foreign body had been in place for a week.

## CELOSOMIAN MONSTROSITY.



Posterior presentation ; delivered from a seven-year-old Jersey cow, April 14, 1903, by B. W. Flint, V. S., Fairlee, Vt. Cow owned by Samuel Cutting, of Oxford, N. H.

"It would be like dropping my veterinary acquaintances to drop the REVIEW."—(*J. C. Burneson, Hammond, Ind.*)

THE first trotting races of which there is any authentic account took place in New England somewhere about the beginning of the last century.

STATISTICS show that there was a sacrifice, during the Boer war, of 419,000 horses, but mainly from being used before they became acclimated.

RECENT statistics of the Department of Agriculture show that Illinois, Iowa, and Texas are the only States that have a million or more horses within their borders.

THE estimates for the appropriation for the support of the army for the fiscal year 1903-1904 carry with it an item of \$450,000 for the purchase of horses. The appropriation for the past year was \$600,000.

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## EXTRACTS FROM EXCHANGES.

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### GERMAN REVIEW.

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By ADOLPH EICHHORN, D. V. S., Bureau of Animal Industry.

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RECOVERED CASES OF HERNIA INGUINALIS AND PERINEALIS [*Prof. D. A. Ploss*].—During the period of fourteen months, three cases of inguinal hernia were operated upon; all three recovered. First case, a four-year-old pointer bitch. Following the third birth, a swelling developed in the left inguinal region, gradually gaining in size until it reached the size of a child's head, interfering with the movements of the animal. The swelling showed all the signs of a reducible hernia; at the base of the same, in the part corresponding to the annulus inguinalis in males, a four c.m. long, and one-and-a-half c.m. wide rupture was noticeable. Anæsthesia was produced with morphine. The hernia was reduced, and in the centre of the swelling an 8 to 10 c.m. long incision was made through the skin. The corresponding portion of the mammary gland, and the peritoneum, also the lining portion of the latter, were resected and their borders united with catgut sutures. Following this, the ruptured opening was closely sutured with catgut, and after uniting the borders of the skin, a bandage was applied. In seventeen days complete recovery took place. Second case, four-year-old fox terrier bitch. After the last birth, she developed also in the left inguinal region a hernia, which considerably interfered with the movements of the animal. Operation as in the first case; recovery in twelve days. Third case, ten-year-old bitch. After repeated births, a right-sided hernia developed. Operation as in the first case, recovery in seventeen days. A case of perineal hernia came under observation in a five-year-old pug dog. To the left, and slightly below the anal opening, gradually a swelling of the size of a goose egg developed, which diminished in size when the hind quarters of the dog were raised, while, when standing on its hind leg, it increased in size. Near the anal opening the  $2\frac{1}{2}$  c.m. wide ruptured opening was detectable. The rupture interfered with the act of defecation, and caused an enlargement of the rectum. The operation, performed under anæsthesia, consisted in the opening of the reduced hernia in the length of 8 c.m.; from the raised peritoneum a portion corresponding to the size of the tumor was cut off, and its borders united

with catgut sutures; after a resection of a superfluous piece of skin, the opening of the skin was sutured. A suturing of the rupture was impossible, as the borders of the same were partly formed by the rectum. By resecting a piece of the skin, the sack was diminished in size, and thereby the pressing out of the abdominal contents was prevented. On the anal portion an œdematous swelling appeared. Recovery took place in twelve days in spite of the fact that a part of the wound did not heal by first intention, due to a probable infection from the rectum.—(*Veterinarius.*)

SIMPLE AND SURE STAINING OF TUBERCLE BACILLI [*De Angelis*].—The author describes a method of staining tubercle bacilli, which, compared with Ziehl's method, surpasses it markedly. Some of the examining material is placed on the slide, on which transversely is placed another one. Through friction of both slides, the material is properly spread. The slides are then dried, and fixed in the flame. For the staining, the following solutions are required: (*a*) ammon. caust. 20, + aqu. dest. 40 (filtrated); (*b*) saturated alcoholic gentian violet solution; (*c*) acid sulph. 10, + aqu. dest. 40 (filtrated); (*d*) saturated alcoholic solution of chrysoidin. Three parts of solution *a* are mixed with seven parts of solution *b*. The prepared slide is then covered with this solution, heated until it bubbles, and has the appearance of a goldish metallic lustre. After cooling it is rinsed with plenty of water, which is then allowed to drip off, and a few drops of solution *c* are put on until the violet disappears and the solution takes up a marked yellow coloration with a slight, greenish hue. This solution is then poured off, and the solution *d* is applied and allowed to act for one to two minutes. This is followed by rinsing with alcohol, complete drying and imbedding in Canada balsam. The tubercle bacilli appear violet on a goldish yellow field.—(*Il Nuovo Ercolani.*)

ECHINOCOCCUS CYST IN THE BRAIN OF AN OX [*De Angelis*].—The author found an ox strongly tied up in a stall, to prevent it from falling. According to the history of the owner, the animal, which he had owned for three months, while plowing became staggers, refusing food, sometimes being depressed, other times excited. The pulse was small, hind parts almost paralyzed, standing with the hind legs far extended. The head was pressed against the wall, eyes staring. From time to time the whole body trembled, coma and excitement alternating. After slaughtering the animal, over and behind the cerebellum, in the subarachnoidal space, a large echinococcus cyst was found,

containing numerous daughter cells.—(*Il Nuovo Ercolani*).

CONTRIBUTIONS TO THE KNOWLEDGE OF RABIES.—An eight-year-old cow with a staring look stood very quietly in the stall. From time to time she kicked with the left hind leg at the abdomen, at which times the muscles of the left side of the neck became spasmodic; at the same time the head was slightly elevated, and with strong blinking of the eyes turned to the left side. After a few minutes the spasms disappeared, and now the animal bit the manger with rage, abraising the mucous membrane of the palate. After the attack subsided the cow remained perfectly quiet for some time, standing with the head drooped, during which bloody foam flowed from the mouth. The attacks came on, at every 15-20 minutes, in the way described above. A two-year-old cow was in a state of great excitement, trampling continually around, tearing on the chain, shaking the head violently, trying to step into the manger, bellowing almost continually, with a changed, but not a hoarse voice. The eyes were bright, without a wild expression.—(*Berndt*). A cow, at first restless, had periodically attacks of rage, foaming very much. Later on paralysis of the pharynx, insensibility and weakness of the hind quarters appeared, gradually developing into complete paralysis.—(*Rupprecht*). A cow showed a staring look, restlessness, salivation, licking different objects, continual bellowing during day and night, stepping into the manger, and at the wall of the stall, rapid emaciation and weakness. After two days the voice became hoarse, finally failing completely. On the third day paralysis of the hind quarters, lower jaw, and pharynx made its appearance, and on the fourth day, the animal died.—(*Kreis, Gross Wartenberg*). A cow observed by Gabbey refused food and drink, was very excited and fearful, bellowed continually, and manifested weakness in the hind quarters. The clinical picture in sheep, is described by Melchert as follows: the animals when approached by men or objects, give a short wheezing sound, which is produced by the violent stertoratory expirations; this is accompanied by stamping with a fore leg. A sick lamb jumped in dog-fashion after a stick, which was held up. Biting rage, however, was not noticeable; the animals only manifested a great desire for licking and abnormal sexual excitement. In one animal early symptoms of paralysis of the hind quarters came in the foreground; in another, which died after eight days of sickness, the paralysis of the hind quarters did not manifest itself until the last two days of life by collapsing in the hind parts in jerks, but

still was able to get up. A reporter from Lanenberg states that a rabid sheep continually ran from one end of the shed to the other, staggering in the hind quarters, occasionally jumping high, and attempting to bite people approaching it. Appetite was completely depraved, foaming profusely from the mouth. A rabid goat showed itching on the place of the bite, manifesting the same by continual rubbing against objects, great excitement, refusal of food, and running against approaching persons.—(*Bermbach's Verœffentlich.*)

### ITALIAN REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

A CASE OF RAPID RADICAL RECOVERY OF UMBILICAL HERNIA IN A FOAL [*Dr. C. Croci and A. Minardi*].—The operation preconized by Prof. Baldoni, which we recorded in our "Italian Review" some time ago, has suggested to the authors its application in this case, although there was no need to resort to the use of the pin to secure the hernial sac. The foal was one year old, and since birth had a hernia, which had been left without treatment. The tumor is about as big as a hen's egg, is covered with healthy skin and shows the umbilical cicatrix very plainly. It is easily reduced. The ring measures about 3 centimeters in diameter. Although probably other simple mode of treatment might be successful, the process of radical cure is decided upon. After thorough disinfection and shaving of the operating field, an incision is made through the skin, the sac opened and the margins of the ring sewed with catgut sutures, and solidly brought well together. The skin is sutured with solid string. A dressing of iodoform is applied and kept in place with a bandage, which, however, it is necessary to remove as it is soon soiled with urine. The wound is then sprinkled with solution of sublimate and dusted with iodoform only. All the sutures are taken out towards the tenth day and in 15 days after the operation the ring is firmly closed.—(*Clinica Veter.*)

PUERPERAL COLLAPSUS RELIEVED BY INSUFFLATION OF THE MAMMÆ [*Dr. Santo Stazzi*].—Prevented for 24 hours from answering a call to visit a sick cow, the author did not see her until she had been ailing four days. When he saw her he was told that she had calved three days before, had fed her calf for three days, and then began to stagger behind, breathing rap-

idly and with difficulty, carrying her head right and left and then finally had dropped. Such indeed was her condition and the history that the diagnosis was certain. Taking into consideration the length of time the animal had been ailing, her chances for recovery were very limited, and if any possibility of treatment existed it was in the use of one which would have a rapid, almost immediate action. Dr. Stazzi ordered thorough washing of the udder with tepid water and soap, with the intention of resorting to the insufflation of air into the udder. A pump like those used by cyclists was adapted to a syringe of Pravey, and this new adaptation was carefully disinfected; when introduced successfully in each one of the teats, those of the right side first and then those of the left, air was thrown into each quarter of the mammæ. When this was sufficiently distended, an assistant knelt down and applied thorough massage. After a certain time the cow, which was almost in a comatous condition, began to move her head, raised it toward the flank, and was able to take a large drink of tepid farina water. Massaging being continued, after a few hours the symptoms gradually diminished and disappeared, the animal getting up and partaking of her food. A second insufflation, however, had to be resorted to. The result obtained makes the author believe that air insufflation is more advantageous, less dangerous and easier of application than the treatment by injection of iodide of potassium solution. Anyhow, the cyclist pump has thus a new application.—(*Chn. Veter.*)

FISTULA OF THE PLANTAR FIBRO-CARTILAGE — ACCIDENTAL WOUND OF THE CAPSULAR LIGAMENT [*Dr. Dario Ferla*].—Wound of the capsular ligament and opening of the joint of the second and third pastern bones during the operation for cartilaginous quittor is always a serious complication, and, notwithstanding the great advantages by the new process of operation and antiseptic precautions, surgeons do not like to see it occur. The case here recorded is, however, interesting principally by the rapidity of the recovery. It is that of a thirteen-year-old horse, which since four weeks has a discharge from the left fore foot close to the coronary band. Of course, there is a fistula which runs four centimeters downwards under the hoof. The animal is very lame, and carries but little weight on his leg. He is thrown, disinfection applied as well as is permitted to a country practitioner, the cartilage is exposed by incisions of the skin, the necrotic portion is excised, when at that moment a struggle of the animal made the sage knife drop from the oper-

ator's hand on the bedding after cutting the capsular ligament and opening the joint. There is no error—the synovia is escaping. Without losing time disinfection with sublimate was freely resorted to and a dressing of naptaline applied. In thirteen days the owner put his horse to work.—(*Clin. Veter.*)

A BEARDED HORSE [*Dr. G. B. Dalan*].—This animal, which is between seven and eight years old, does every week the service of bringing calves to markets in the neighborhood, and is the object of such curiosity that the people go to the markets only to see the bearded horse. On the superior lip, which is perfectly normal in shape, he carries a pair of mustaches, not made of a few fine hairs gathered together, as those which are sometimes observed on the upper lip, but these are white, thick, and measure 20 to 25 centimeters in length; they are true hairs like those of the mane and tail, and give certainly a very peculiar looking aspect to the horse. If the case has no important scientific value, it is nevertheless interesting.—(*Clinic. Veter.*)

DISLOCATION OF THE TENDON OF THE POSTEA-SPINATUS MUSCLE OF THE HORSE—BURSITIS OF ITS SYNOVIAL [*Prof. A. Vacchetta*].—These conditions have been observed by the author: In one, the near side horse of a team, slipped and fell, remaining down under the weight of the pole of the wagon and that of his mate. Raised, he shows apparently no trouble, and walks toward home, when after a short distance he shows lameness of the right fore leg. A blacksmith is called and prescribes an astringent poultice. Later on the professor is called. He finds the horse lame, with difficulty of leg being carried forward, there is slight rotation inwards and slightly backwards; the right trochiter is covered only by the skin and the cutaneous muscle; the tendon of the postea-spinatus is relaxed and pushed backwards. The right foot being raised, the fore arm flexes, with the arm extended and the elbow brought near the trunk. All attempts to push the tendon back in its position failed. A blister is applied over the whole region; in three weeks the animal resumes work. There remained a slight atrophy of the muscle. In the second case, it was a draught horse which had a swelling on a level with the tendon of the postea-spinatus. This tumor is warm, rather painful, tense and slightly moveable; it is projecting and raises the skin which is over it. This is normal. Twelve leeches are applied over it and hot fomentations prescribed. After a slight improvement, the swelling increases, becomes hard and fibrous, and is resistant to treatment of alteratives and massage; the serous bursitis has become hy-

perplasic. Firing and afterwards extirpation are resorted to.—(*Il Nuovo Ercolani*.)

RETENTION OF THE AFTERBIRTH IN COWS [*Vito Giachini*].—In connection with the excellent article on the subject by Prof. W. L. Williams, published in the December (1902) REVIEW, I find the following from one who advocates the interference of the obstetrician under peculiar circumstances: (1) If the foetal envelops appear outside, slow and continued traction is indicated until resistance is felt; the protruding envelops are excised and the operation continued the next day; (2) If the envelops are entirely within the uterine cavity, introduce the hand into the womb, to take hold of the mass, bring it out in the vagina and extract it by slow, careful pullings; (3) If the placenta and ovaries are disintegrated, clean the cotyledons and also the uterus. The operation is finished by thorough washing of the vagina and uterus with 4% glycerine phenicated solution, renewed twice a day, according to the condition of the envelops. Should puerperal fever occur, injections of Marmoreck serum and phenol glycerine give good results.—(*Giour. della R. Soc. and Acad. Vet. Ital.*)

MULTIPLE MIXOMA OF THE OMENTUM IN A DOG [*Prof. U. Caparini*].—Mixomas are comparatively rare in our domestic animals; few observations have been recorded, and the following adds to the history of those neoplasms by its clinical value and the symptoms presented. A young setter had died with all the manifestations of pulmonary œdema. He had been sick for a month; presenting among the most prominent symptoms a progressive enlargement of the abdomen, which in a few days had assumed an enormous size. There was first diminution of appetite, then complete anorexia, constipation, excessive loss of flesh. On manipulation of the abdomen, the presence of a large mass was detected, bosselated, somewhat elastic, which by its enormous size could not be but a malignant tumor. At the post-mortem, there was no fluid in the abdominal cavity, but an enormous mass filling the greatest part of the abdomen and attached by various points on the omentum. The mass was divided into several tumors. Five or six being larger than the others, two were as big as one steer kidney; another had the shape of the heart of a dog with its base continued to the structure of the spleen. A large number of those neoplasms varied in size between that of a nut to that of an orange; all were covered with a thin membrane. Their consistency was soft, somewhat fluctuating; their superfcy appeared generally

grey, slightly yellowish and in some parts reddish or even dark red. No other lesions were found. The mass of the growth weighed six kilogs and a half (13 pounds).—(*Il Nuovo Ercolani*.)

**SALOL IN HEPATIC DISTOMATOSES** [*Dr. M. Romagnoli*].—In a flock of sheep, after pasturing on a marshy land, many of them developed all the symptoms of distomatose: slow motions, poor appetite, great thirst, subcutaneous œdemas, pallor of the skin of the ears, of all the visible mucous membranes, characteristic swelling in the intermaxillary space, yellow color of the skin and of the mucous membranes; in some animals diarrhœa and collapse. To confirm the diagnosis the author made post-mortems on two animals killed for the purpose, and found lesions of undoubtful nature. In the presence of the extent of the disease, of the loss of many of the animals, and of the pecuniary loss in view, all kinds of treatment were resorted to without any result. At last the author decided to use salol. He prescribed one gramme of salol in a spoonful of water to be given every morning on empty stomach for eight days. The result was a perfect success, as all the animals remaining recovered.—(*Il Moderno Zooiatro*.)

**AN INTERESTING CASE OF DIFFUSED ECHINOCOCCI IN A SOW** [*Dr. Alf. Minardi*].—This was observed in a three-year-old animal killed in a public slaughter-house. The lungs were found containing a great number of small cysts situated principally near the borders. The heart, which was enlarged in size and so changed in shape that it had an almost spherical form, had two cysts in the walls of the left ventricle and one as big as a nut in the right. These walls were much thicker than normal. In the liver there were numerous parasitic cysts, some of them as big as an hazel-nut. The spleen was literally covered with about thirty cysts, some of them being as big as pigeon's eggs. The right kidney had on its outside surface three cysts, and the right two external and one in the medullary substance. This last was in process of degeneration. Some cysts were found in the adipose tissue round the kidneys and one in the psoas muscle. These last were as big as a nut and are very seldom met with. The examination of the cysts revealed their parasitic nature—they were echinococci.—(*Clin. Veterin.*)

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## BELGIAN REVIEW.

By Prof. A. LIAUTARD, M. D., V. M.

INTERMITTENT TYMPANITES IN A COW—CICATRICAL CONTRACTION OF THE SMALL INTESTINE—PECULIAR DILATATION OF THE ORGAN [*M. Nandrin*].—This animal has been ailing for some six months. At intermittent spaces, say about every fifteen days, she is taken sick; it lasts a few days, recuperates and is taken bad again about two weeks later. During her sickness there are always three principal manifestations: loss of appetite, arrest of rumination, slight tympanites. She has lost considerable flesh, has some liquid passages at times—that is all. Careful examination reveals nothing except at the rectal exploration some abnormal sensibility when the hand presses on the rumen. The cow was destroyed. At the post-mortem an abscess was found on the rumen, twice as big as a man's fist. It opened in the rumen, and contained pus and food mixed. But the intestine showed the most interesting part. In its anterior portion, for a length of about three metres, the small intestine is dilated four or five times its normal size and its coats are thickened, the muscular coat being exceptionally developed. This dilatation is not uniform; and on the surface of the organ are seen numerous spherical little tumors, all fluctuating and opening in the cavity of the intestine. They were all running along the small curvature of the organ and nearly at equal distance from each other. This dilated portion ended suddenly at a limited contraction indicated by a circular ring hard and cartilage-like. The small finger can scarcely pass through it. Beyond this contraction, the viscera resumes its normal condition. For the author these lesions were probably the sequelæ of the presence or a foreign body which had given rise to the abscess of the rumen, to an injury, prick or tear of the intestine, which has ended into cicatricial contraction, partial obstruction and dilatation of the intestine with change in the muscular coat.—(*Annales de Bruxelles*.)

SERO-FIBRINOUS PLEURISY OF THE HORSE—THREE CASES SUCCESSFULLY TREATED BY EARLY THORACENTESIS [*E. Lienaux*].—Encouraged by the numerous reports relating to the good effect of the early operation, the author decided to resort to it. The three cases which he describes were treated in about the same way, the result being the same, viz., rapid recovery. The first case affected with typhoid fever, complicated

with jaundice, had also pneumonia, with the bilateral dullness of pleurisy. Two punctures were made, one on one day, the other the day after: serous fluid escaped; in a few days the animal was discharged. In a second case, the animal was affected with pneumonia first and pleurisy occurred only a few days after. With one puncture only, the animal recovered in less than two weeks. The third case was a little more serious. The subject had typhoid fever, pneumonia set in, followed in four days with bilateral dullness of pleurisy, on an horizontal line from the lower part of the chest up to the separation of the lower and middle third. Besides the puncture, spirits of turpentine was added to a diet of milk. At the first puncture only a small quantity of bloody serum with fibrinous clots was removed. On the next day five litres of fluid were taken away by another puncture. Later on three more punctures were resorted to and pilocarpine nitrate administered once. Iodide of potassium was also prescribed towards the end of the treatment. The total amount of fluid extracted varied between fifteen and twenty litres, but it remained all along with its hæmorrhagic tint. The treatment of this animal lasted longer than the others. Its sickness began on the 19th of November and it was not before the 20th of March that he resumed work. The author recommends that the operation be done aseptically, and that no air be allowed to enter the pleural cavity; he avoids it by using Dientafay's aspirator.—(*Annales de Bruxelles.*)

PERINEAL PSEUDO-HERNIA IN A DOG—INFLECTION OF THE RECTUM BY HYPERTROPHY OF THE PROSTATE—REDUCTION BY RECTOPLEXY [*Prof. E. Lienaux*].—An aged dog had difficulty in making manure; he makes violent efforts and only expels very little matter. On the perineum there is a tumor as big as the fist. It is situated below the anus and is regularly round. On feeling it, the skin is found sound, loose, and the tumor is reducible. Its contents seem formed of various elements, a soft viscera, rather twisted, and a hard body, also reducible. There is no trouble in micturation. The deformity runs along the anus and its contents seem in continuity with the end of the rectum. An asymmetrical dilatation of the rectum is suspected. The small hard mass felt in the tumor is probably an hæmorrhoidal lymphatic gland hypertrophied. As treatment rectoplexy is decided upon. The flank is opened, the rectum taken hold of, drawn forward, and when the reduction is completed, is sutured to the wound of the flank with two stitches. The immediate effects were good, but the next day the tumor had returned and with it

the difficulty in defecation. Direct action is then decided on, the skin is incised to the right of the median line of the perineum and the rectum exposed as well as the hypertrophied lymphatic gland. This is removed, and instead of the supposed rectal dilatation, an inflexion is found. The rectum forms a curved loop, with two branches four or five centimeters long, which is the obstacle to the passage of the fæces. The recto-genital *cul-de-sac* of the peritoneum is pushed well backwards and is separated from the skin only by a thin layer of connective tissue. The diagnosis being now established, rectoplexy is to be performed a second time, but with the modification that the rectum shall be more firmly secured to the edges of the wound. This is obtained by six sutures involving the musculo-serous coat of the organ and the borders of the incision of the parietal peritoneum. On the following day defecation was normal and remained so afterwards. An examination of the prostate revealed it to be quite largely hypertrophied.—(*Annales de Bruxelles.*)

A REMARKABLE OUTBREAK OF CONTAGIOUS MASTITIS IN COWS [*C. Radway, M. R. C. V. S.*].—In April, 1902, a farmer bought two fresh cows, which he introduced among his. They seemed healthy. Three weeks later complaints were made about the milk, which kept badly and had an offensive smell. After inquiries and observations, it was found that the two new cows were not the only ones that proved diseased, but fourteen others gave bad milk. All the cows were isolated, stalls disinfected, floors limed. This was not sufficient to stop it, as new infected animals were detected, even among cows kept in other sheds some distance from the original one. No matter what was done, now and then a new case showed. Strong disinfecting injections were made in the udder of the sick, and, although they helped as long as they were carried out, the bad condition of the milk returned as soon as they were stopped. The incubation of the disease in fresh cows varied from six to twelve days, according to the animal being an easy or a hard milker. Tired of using all the sanitary measures indicated and having in vain resorted to all known processes of disinfection, the owner decided to slaughter them. A few of them, which appeared to have recovered, were kept, but isolated. The infected buildings and all utensils were again submitted to the most thorough washing and disinfection, and after several months the buildings were thrown open to fresh air and sunlight, and ultimately new stock allowed to go in. Since that no more disease has occurred, but it had a long run.—(*Journ. Comp. Path. and Therap.*)

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**ABSTRACTS FROM MEDICAL LITERATURE.**

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Under the Direction of E. M. RANCK, V. M. D., Natchez, Miss.

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**THE DISTRIBUTION OF HYDROPHOBIC VIRUS IN THE BODY.**—There are a number of interesting problems connected with hydrophobia which claim our attention. Aside from the all-important question of the causative agent, which is still unknown, we are still lacking in information on the exact mode of the dissemination of the virus. We know, for instance, that the virus is constantly found in the saliva and in the nervous system, but whether it is also present in other organs and fluids of the body has not been definitely established. Bombici detected the virus in the lachrymal, superenal, pancreatic and mammary glands. Cardelli failed to find it in the liver, spleen and crystalline lens. De Blasi and Travali found it in the semen. Roux and Galtier detected it in the lymphatic glands and lymph. Bardach and Rough proved that the virus may be transmitted through the placenta. This was corroborated by cases of alleged placental infection reported by La Josse, Canillac, Kolesnikoff and others, but contradicted by the experiments of Pastuer, Horsley, Celli, De Blasi and especially Zagari. Krokiewiez (*Gazeta lekarska*, No. 8, 1902) inoculated into rabbits pieces of medulla obtained on an autopsy from a pregnant woman, who died of rabies, and her nine months' old foetus. The rabbit inoculated with the medulla from the mother developed rabies, while the other remained well, thus showing that the virus is not transmitted through the placenta. Nor is immunity to rabies transmitted through the placenta, as shown by the experiments of Hogyes. The most exhaustive work on the dissemination of hydrophobic virus has been done by Tcherevhoff. In a recently published paper (*Russky Vrach*, No. 48, 1902) he presents the results of his extensive experiments conducted since 1890. He determined the presence of the virus in the blood, spleen, submaxillary gland, liver, voluntary muscles, pancreas, bone marrow, the fluid from the lateral ventricles and cerebro-spinal fluid, suprarenal gland, kidneys, lungs, testicles and various nerves. With the exception of the peripheral nervous system and the submaxillary gland, the virus could not be found in any other tissues. The author has also shown that, when injected into the blood-current, the virus disappears within an hour, being deposited primarily in the liver and spleen. The

practical conclusions which can be drawn from the experiments are, first, that the virus is carried only by way of the nervous system, and there is, consequently, no danger if it happens to enter the circulation, and, second, that the various organs of a rabid animal, except the nervous system and salivary gland, may be handled with comparative impunity.—(*Editorial Comment, Phil. Med. Journal, Vol. II, No. 4.*)

ON THE COMMUNICABILITY OF BOVINE TUBERCULOSIS TO MAN.—Koch gives a general view of the work that has been done since the publication of his celebrated article on this question. He now confines himself strictly to the consideration of the communicability of animal tuberculosis to human beings, stating that discussion of the contrary proposition would carry him too far. He says that, in spite of his request to the authorities to inform him of any case of intestinal tuberculosis, possibly due to drinking the milk of tuberculous cattle, he has had no such case brought to his notice within fifteen months. He draws especial attention to the great infrequency of cases that are worthy of consideration as being possible examples of this condition. He considers all the cases of tuberculosis verrucosa cutis to be subject to the most severe criticism. He believes that, if milk causes tuberculosis, the infection should be one that occurs in groups; yet this is not the case. He also believes that there is no instance on record in which it has been shown that tuberculous meat has caused tuberculosis in a human being, in spite of the fact that there is every probability that all human beings eat living tubercle bacilli in the course of their lives. As for the effects of milk, Koch reviews the reports of Ollivier and Hüls, in particular, and decides that they do not at all demonstrate that the infection took place from milk. He insists that, in order to settle this question, cases of supposed infection from milk must be investigated post-mortem, that there must be an exclusion of other sources of infection, that tuberculosis of the udder in cattle supposedly causing the infection must be present, and that other persons who have taken the same milk must be shown to have acquired tuberculosis.—(*Deutsche Medicinische Wochenschrift, Nov. 27, 1902; Abs. Phila. Med. Journ., Vol. II, No. 4.*)

PEDIATRICS.—Wentworth (*Boston Medical and Surgical Journal, June 26th and July 3d, 1902*), discusses this problem at length. The substance of his paper is given in the following conclusions: (1) The general statement that the upper one-fourth of a quart of cow's milk in which the cream has risen,

contains 10% of fat, is the average of a large number of milks, but there is too much variation in different cows to enable one to figure the milk modifications on this basis accurately. (2) This would not be of so much consequence if the percentage of fat in the cream was always low, but too much fat in modified milk is more liable to cause digestive disturbance than too little. (3) It is advisable, therefore, to have the percentage of fat determined in the cream at least once whenever the infant begins to use modified milk and to repeat this at the time of the year when the cattle's food is changed. (4) It is not advisable to modify the milk with cream in which the percentage of fat is under 10%, because, if one obtains a sufficient percentage of fat in the modification, the percentage of proteids will be too high in many cases. (5) If the percentage of fat is too low in the upper 8 ounces of one quart of "set milk" it is better to take fewer ounces off the top, determine the percentage of fat in these ounces, and use such a number of ounces of cream as contains 12% or more of fat. If more proteid is required it can be obtained by the addition of the lower milk, which is almost free from fat. (6) A safe rule would be to have at least one determination of fat made, no matter how many ounces are taken from the top of the "set milk" and afterward to continue to take the same number of ounces off each time. (7) In order to make a modification of milk in which a high percentage of fat is combined with a low percentage of proteid it is necessary to use cream that contains a high percentage of fat. In general, it is better to use a cream removed from the milk at home than to use a cream bought for this purpose, because the latter is much more likely to be stale and to have undergone changes due to heat or age. (8) Within certain limits, accurate percentage modifications of milk are not essential to the well-being of a majority of the babies that are fed on modified milk. Proof of this is afforded by the fact that so many infants do well when fed on modified milk and yet it has been shown by the results of analysis that these modifications are rarely accurate. Unfortunately, it is not always possible to tell beforehand to which class a given case belongs, and this is a sufficient reason, even if there were no others, for modifying the milk as much as possible. A complete analysis of the milk requires too much time and training to make it a practical procedure, except in special cases. The determination of the percentage of fat in the cream used for modification is easily made, requires but a few minutes to do and enables modifications of milk to be made that are ac-

curate enough for most cases, if in addition directions for modifying are carefully given and followed. (9) The advantage of modifications of milk furnished by establishments is that it is convenient. It relieves the family of all responsibility so far as the preparation of the infant's food is concerned. Three great objections to the use of commercial modifications of milk are: (a) inaccurate modifications; (b) stale milks; (c) expense. (a) The claim is made by those interested in the sale of commercial modifications of milk that the percentage of fat, sugar and proteids are accurately determined in each modification. This claim of exactness forms the basis upon which such commercial modifications of milk largely depend for their success. The 26 analyses he gives show how little dependence can be placed upon such statements. (b) People who reside beyond the limits of wagon delivery (and most people do for several months each year) have to use on Sunday and a part of Monday milk that is delivered on Saturday and of a necessity milked on Friday. It is claimed that no deleterious changes take place in these milks if they are kept cold. A sufficient number of clinical observations has been made to show that such a claim is unwarranted. (c) The cost of modifications of milk made at home is less than twenty-five cents a day. Compare this with the cost of commercial modifications of milk, to which in many cases must be added the cost of transportation. (10) The technique of fat determined by the Babcock method is simple and easily acquired. The entire outfit, including a centrifugal machine, flasks, pipettes and acid can be purchased for nine dollars. The time required for a fat determination by this method is about 15 minutes.—(*Boston Medical and Surgical Journal*, June 26 and July 3, 1902; *Therapeutic Monthly*, Vol. II., No. 8.)

NO HYDROPHOBIA IN ENGLAND AND AUSTRALIA.—In both of these countries the presence of hydrophobia has been completely stamped out by drastic measures and legislation regulating the importation of dogs. Every dog arriving in England is quarantined for several days, during which time it is examined by experts to ascertain whether the dog has rabies or not. Thus the lack of hydrophobia in England or Australia is due to the simple fact that no animal with rabies is admitted into the countries, and no other animal can contract the disease, since there is no chance of coming in contact with an animal having the disease.—(*Phil. Med. Journal*, Vol. II, No. 1.)

PASTEURIZED AND STERILIZED MILK AS A CAUSE OF RICKETS AND SCURVY.—Sill holds that cow's milk is the best sub-

stitute for mother's milk, when properly prepared; but cow's milk is not bettered by sterilization or pasteurization; on the contrary, he believes that this treatment undoubtedly makes it the direct cause of rickets and scurvy and kindred diseases in children. The object of pasteurization can be safely accomplished, in his opinion, by receiving the milk in sterilized quart-bottles, which are then tightly sealed, labeled with the dairyman's name and the date, and cooled immediately to a temperature of 40° F.—(*Phil. Med. Journal*, Vol. II, No. 1.)

KOEHLER ON THE PRESENT STATUS OF THE COMMUNICABILITY OF TUBERCULOSIS OF CATTLE TO HUMAN BEINGS.—The article is a general view that leads up to the conclusion that it is not yet determined whether tuberculosis of cattle and that of man are due to different organisms. It is, therefore, not known whether they are intercommunicable. It is, however, certain that tuberculosis of cattle is of less importance to human beings than tuberculosis in other human beings. It is very important to see that milk is sterile, less on account of tuberculosis than on account of typhoid fever, scarlet fever, and other diseases. In connection with tuberculosis, however, it is chiefly important to see, so far as possible, that no opportunity is given for one tubercular person to infect another. Measures taken with this object in view are the most important of all in relation to the spread of tuberculosis and the limitation of this disease. Consequently, hygienic regulations of human beings and, as far as possible, their isolation in sanatoria are the chief matters of importance in connection with the control of tuberculosis.—(*Deutsch. Medic. Wochen.*; *Phil. Med. Journal*, Nov. 6, 1902.)

A VERY OLD HORSE.—Dr. E. P. Edwards, in the *London Veterinary Record*, furnishes the details of the following story: "Old Tom," as he was known for the latter part of his life, was born in March, 1859. He was a black gelding, used when young as a saddle and harness horse; for the last ten years he enjoyed a well-earned pension from his owner, living chiefly out of doors. He was never sick, his only trouble being with his molars, which required periodical rasping. He died lately at the advanced age of forty-three (43) years and a few months. The peculiarity of this record is that his owner was 83 years old, his wife 86, and the old horse 43—making for the trio the respectable figure of 212 years. [This does not approach the greatest recorded age of the horse, however, by many years.—EDITOR REVIEW.]

## ARMY VETERINARY DEPARTMENT.

This REVIEW department was opened in the March number, and its object was there explained—the betterment of the Army Veterinary Service, through affording a forum for the discussion of subjects in which army veterinarians are deeply interested, and which are at the same time of interest and value to veterinary readers generally. The profession, and particularly army veterinarians, are invited to contribute communications, original articles, items of news, etc.

### PROPOSED LEGISLATION FOR RETIREMENT OF ARMY VETERINARIANS.

There are now two Army Veterinarians on the active list—Veterinarian John Tempany, 9th Cavalry, and Veterinarian Samuel W. Service, 10th Cavalry—who are both over 64 years of age, and with a service of over 40 years, who would be entitled to retirement pay—if they were not veterinarians.

As this is a matter which vitally interests all Army Veterinarians, a letter was addressed to Dr. Tempany, asking information in regard to the fate of his bill for his retirement which he had introduced at the last session of Congress, and as to what, in his experience, had made such a course necessary, and whether he had beforehand definitely ascertained that he could not be retired under the present laws governing the Army. Dr. Tempany replied very promptly, informing me that he knew of no law whereby he could be retired as veterinarian, hence his special bill. He states that the retirement laws were made for commissioned officers, and as we are not commissioned, he could only be retired on special legislation. He also informs me that Dr. Service, 10th Cavalry, was about to apply, through official channels, for retirement, and if this failed, as it likely would, that the Army Veterinarians would introduce a bill at the next Congress asking for *rank*, which would, of course, include the privilege of retirement.

This brings us face to face with our future legislation. I have intentionally held back so far with any proposition in this line, hoping that someone else would start suggestions. But we must do something, do it openly, and it is not too early to start it. While I am heartily in sympathy with attempts to se-

cure the much-earned retirement for our old army colleagues, I am also frank to confess that I am, personally, opposed to such piece-meal legislation.

What we need is legislation for the creation of an *organized veterinary service* that will enable us to perform our duties unhampered and with a certain degree of authority, which need not be the military authority that comes with rank; we need some *promotion* and *retirement on age* or disability, so that intelligent and ambitious veterinarians may have something to look forward to and will stay in the service. The indolent hanger-on cannot assist us in squaring ourselves with the Army as regards our worth and advancement.

But the renewed attempt to gain rank by congressional legislation is bound to be again a failure. One must know the spirit of our Army to understand the situation. I have taken some pains to ascertain the feeling of those Army officers from whom I could expect a candid opinion, and the consensus of opinion seems to be that the feeling in the Army is against giving us rank, not so much because we are veterinarians, but from a general principle gained by the favored position of other officers, who were not military men, and whom rank has made distasteful in many minor ways. Veterinarians who are on familiar terms with Army officers understand this sentiment. On the other hand, it appears to be conceded that we ought to have the right to retirement, and some sort of promotion after certain periods of service and due examination; for instance, the pay and allowances of first-lieutenant after five years' service and examination, and the pay and allowances of captain after ten years' service and examination for chief veterinarian. It is conceded that we need chief veterinarians, as our duties, especially in the field, in the suppression of contagious diseases, are much more coöperative than those of the dental surgeon's, whose work is entirely individual, but who have nevertheless three examining and supervising dentists. Even the female nurse corps possesses a superintendent. This comparison is somewhat ludicrous, yet it was made in all earnest by one of our friends, and it illustrates how difficult it is for our Army friends to literally grasp the wide, scientific education which our professional study entails.

If the feeling to better our position in the Army along the lines suggested above is present, we ought to make use of it, and not antagonize it by asking for rank, which would, after all, merely add to our lustre by military splendor and gold laces, which an earnest scholar of a great science can well afford to

accord to the purely military man, who needs it for his outward show of authority.

Our future veterinary service would, as I understand it, be organized about as follows :

1. One officer of the Adjutant-General's Department in charge of veterinary affairs, as at present.
2. One Chief Veterinarian of Cavalry, with pay and allowances of Captain, after ten years' service.
3. One Chief Veterinarian of Artillery, after ten years' service.
4. One Chief Veterinarian of the Quartermaster's Department, after ten years' service.
5. 15 Regimental Veterinarians of Cavalry with pay and allowances of First Lieutenant, mounted, after five years of service.
6. 25 Assistant Veterinarians of Cavalry and Artillery, with pay and allowances of Second Lieutenant, as at present.
7. Contract Veterinarians, as many as are authorized by the present law, at \$100 per month.
8. Promotion of farriers and horse-shoers to sergeants after examination and second enlistment.

This scheme necessitates only the creation of the three additional positions of Chief Veterinarians, and the promotion of fifteen veterinarians to the pay and allowances of first lieutenant after five years' service, with a small advancement of pay. Surely it is a modest scheme, but it will be a working unit. It may be a disappointment to the young among us who dream of a full-fledged veterinary corps, and it will be hard for those of middle age who have only a few years of service to see men younger in years and experience step into the favored places gained by greater length of service. But personal considerations cannot be entertained in a plan for the general good, and it is only that we can attain an organization if we follow the precedent in the Army as established in all other branches of the service.

Now, please, Army colleagues, come out with your sanction or objections in the pages of the REVIEW, which were so generously offered us for this purpose. OLOF SCHWARZKOPF.

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#### THE REPORT ON "SURRA" BY GENERAL WINT, U. S. A.

In the last issue of the REVIEW we commented on the trip of General Wint, U. S. A., to British India for the purpose of

investigating the English methods of dealing with "surra," and predicted that the results of this inquiry could not be much different from the advice given by the calmer and more experienced army veterinarians in the Philippines.

While we have not yet seen Circular No. 6., Headquarters of the Philippines, which was also mentioned in the issue of last month by a correspondent from the Philippines, it is evident from the tenor of his letter that the circular in question recommends the treatment of "surra" by hygienic measures, rather than by medicines, laying great stress on the avoidance of feeding infected grass and water. This was exactly the position taken by us, but our advice was not heeded, and instead those were favored with credulity who advocated all sorts of medicinal agents, with loss of valuable time in the eradication of this disease. (O. S.)

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DR. GELSTON'S DISAPPEARANCE.

By order from Headquarters of the Army, dated May 5, 1903, Veterinarian Samuel L. Gelston, 3d Cavalry, was discharged from the service of the United States on account of absence without leave.

This order has a sad story at its foundation. Dr. Gelston was temporarily stationed at Fort Meade, S. D., and early in April he acted strangely for a day or two, finally exchanged his uniform for civilian clothes, left the garrison, and has not been seen since. Searches after him have been without definite results. There is no doubt that he wandered off in a fit of temporary insanity, as he disappeared once before under similar circumstances while serving in the Philippine Islands, but at that time a searching party rescued him, and a three-months treatment at the Military Hospital at Corrigidor Island, Manila, had apparently restored him to health. Under these circumstances desertion has been excluded, and his disappearance and probable death are the result of a recurrent attack of mental aberration originally caused by service in the Tropics. (O. S.)

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SOME CHANGES WHICH HAVE TO TAKE PLACE AMONG THE  
ARMY VETERINARIANS.

(1) An organized corps, which can only be consummated by a joint interest of veterinarians all over the country, getting the assured promise from their Congressmen and Senators to vote for the bill when presented; then we must have some influential representative in Washington to keep pushing it for us. I

think if Dr. Salmon would accept the task he would be our best man. If veterinarians would call on their Senators and make them cognizant of the necessity of having a corps, as all other nations have, and show them how badly managed everything pertaining to our branch in the Army is run, they could not but help give their support. Will all who read this do this at their first spare moment?

(2) We must have a commission. Without it we are on a low footing with enlisted men and the unpleasantness of being turned out of quarters by any newly joined second lieutenant because he happens to rank you; in fact, at present the veterinarian is at the tail end of everything.

(3) We must endeavor to show the War Department we are educated men and not the old-time home-made "horse doctors" they employed in bygone days; show them that if we are given microscopes we can investigate outbreaks of obscure diseases just as well if not better than the M. D.'s; and that when a disease is to be investigated in British India veterinarians are the men to send and not major-generals or majors of artillery. Then socially let us hold our heads up, being proud of our profession, and show to the officers whom we associate with that we are scientific, thoroughly educated professional men. The *sine qua non* is a veterinary corps, and once we have one with a good man at the helm everything will be righted.

I ask on behalf of the Army veterinarian the most earnest help from all our *confrères* in the United States to obtain this recognition for us.

W. P. HILL,

*Veterinarian 12th Cav., Fort Clark, Tex.*

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#### ARMY VETERINARY DEPARTMENT NOTES.

Dr. S. L. Gelston, of the 3d Cavalry, disappeared from Fort Meade, S. D., very mysteriously on the morning of March 24, and no trace of him can be found.

First-Lieutenant McNalley, of the 3d Cavalry, and Veterinarian C. H. Jewell, of the 13th Cavalry, have been detailed to purchase 235 cavalry horses at Fort Meade for the 3d Cavalry.

PRESIDENT SPRINGER, of the National Live Stock Association, has notified Dr. W. H. Dalrymple, of his appointment as a member of the Committee on Sanitary Measures of that Association. The Doctor is already a member of the Executive Committee.

## COLORADO'S PRACTICE ACT.

STATE VETERINARY SANITARY BOARD OF COLORADO,  
DENVER, COLORADO, March 27, 1903.

*Editors American Veterinary Review :*

DEAR SIRs:—Thinking it might be of interest, I enclose a copy of a bill which has been introduced in the Legislature of Colorado, has passed the House and is now before the Senate, with every prospect of the success of its passage. The veterinarians of Colorado realize this bill is not very drastic, but at the same time realize that it is a step in the right direction, and since heretofore Colorado has had no law whatever governing the practice of veterinary surgery and medicine, we will feel highly elated if this bill passes, and hope in future years to finally get legislation which is needed.

Yours truly,

A. B. McCAPES, V. S., *Secretary.*

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A BILL FOR AN ACT REGULATING THE PRACTICE OF VETERINARIANS AND VETERINARY SURGERY IN THE STATE OF COLORADO, AND PROVIDING PENALTIES FOR THE VIOLATION OF THIS ACT.

*Be it Enacted by the General Assembly of the State of Colorado :*

Section 1. There is hereby created a board of veterinary surgeons. Said board shall be appointed by the Governor and shall consist of three members, one of whom shall be the State Veterinary Surgeon and the other two shall be graduates of a recognized veterinary college, who shall have resided in the State of Colorado and been in the practice of veterinary surgery for the space of three years prior to their appointment.

Sec. 2. Said board of veterinary surgeons shall have power to examine all applicants for admission to practice veterinary surgery and medicine in the State of Colorado, and to issue certificates or licenses to practice veterinary surgery and medicine. Said board shall sit at the capital of the State at least once a year for the purpose of making examinations and issuing certificates or license to practice veterinary surgery and medicine, which meeting shall be held on the first Tuesday in January of each year.

Sec. 4. The board of veterinary surgeons shall receive no

salary from the State, but they shall be entitled to receive a fee of five dollars for each examination, and an additional fee of five dollars for each certificate issued.

Sec. 5. Nothing in this act shall prevent any person practicing veterinary medicine, provided said person shall not use the title of veterinary surgeon, or that of any degree conferred by a recognized veterinary college.

Sec. 6. Any person violating any of the provisions of this act shall be deemed guilty of a misdemeanor, and upon conviction shall be fined in any sum not exceeding one hundred dollars, or imprisoned in the county jail not exceeding thirty days, or may be both fined and imprisoned in the discretion of the court. Justices of the peace shall have jurisdiction under this act.

Sec. 7. In the opinion of the General Assembly an emergency exists; therefore, this act shall take effect and be in force from and after its passage.

That said bill shall be amended by the striking out of Section 3, of the printed bill, and the substitution thereof of a section to read as follows:

No person shall be admitted to or licensed to practice veterinary surgery, dentistry or medicine in the State of Colorado, unless such person shall be a graduate of some well-known and recognized veterinary college, and any college having a course of two years or over, and having six (6) collegiate months in each year, and having at least five (5) instructors in the science of veterinary surgery and medicine shall be a recognized veterinary college. The license or certificate granted by the Board herein created shall be to practice veterinary surgery, dentistry and medicine, and the person so licensed shall be known and deemed in law a veterinary surgeon.

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## COLLEGE COMMENCEMENTS.

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### CHICAGO VETERINARY COLLEGE.

The nineteenth annual commencement exercises were held at the College Auditorium on Friday evening, March 27th, 1903. The room was handsomely decorated for the occasion and was filled with an appreciative audience of more than three hundred, numerous ladies, friends of the faculty and graduating class being present.

Professor A. H. Baker presided and the following members

of the faculty were present:—Professors Joseph Hughes, M. R. C. V. S.; A. S. Alexander, F. H. A. S., M. D. C.; E. L. Quitman, M. D. C.; J. F. Ryan, D. V. S.; G. A. Lytle, M. D. C.; G. M. Cushing, M. D.; L. A. Merillat, M. D. V., V. S.; E. Merillat, A. B., M. D. V.; James M. Wright, D. V. S.; James Robertson, M. D. C.; John D. Robertson, M. D.; and C. A. White, M. D. C. In a short introductory address, Professor Baker commented on the exceptionally good showing made by the class of 1902-3, complimenting them on their regularity in attendance, general conduct, and high average in their final examinations. Professor Hughes then read the Secretary's report, congratulating the present class on their high attainments, and stating that in point of quality they have never been surpassed by any previous class. He alluded to the fact that this year was a record-breaker both with regard to the number of honorary graduates and regular students attending. The classes of 1902-3 comprised one hundred and eighty-five regular students and twenty post graduates. Concluding he announced the names of those who had passed the final examinations, the following of whom comprised the honor list: J. L. Axby, C. A. Dawdy, C. A. Hatterscheid, A. B. Hollis, J. B. Jaffray, H. J. Kohler, E. L. Lewis, D. J. McMahan, C. Olson, G. M. Otis, J. M. Parks, L. H. Quitman, J. W. Robinson, A. H. Schmoyer, C. G. Schultz, R. Snyder, C. M. Weese, M. M. White, W. D. Wright, M. J. Woodliffe, B. J. Zimprich.

Following the Secretary's report Prof. A. H. Baker conferred the degree of Doctor of Comparative Medicine (M. D. C.) on the members of the class, and Professors Hughes and Quitman distributed the diplomas as follows: R. M. Allen, Marshalltown, Iowa; J. L. Axby, Guilford, Ind.; F. N. Anderson, Buffalo, N. Y.; L. F. Barber, Tyndall, N. D.; F. R. Bernard, Sheridan, Ill.; H. F. Boettner, Perryville, Mo.; P. H. Browning, Carrollton, Mo.; D. B. Clark, Janesville, Wis.; A. B. Cox, Chicago, Ill.; C. A. Dawdy, Greenville, Ill.; A. L. Deal, Wilmot, Ohio; C. S. Evans, Grand Island, Neb.; E. O. Faires, St. Jacob, Ill.; O. K. Faires, St. Jacob, Ill.; L. A. Forge, Burlington, Wis.; G. J. Graen, Toulon, Ill.; S. Gault, Knoxville, Ill.; F. A. Gibbs, Palatine, Ill.; H. H. Gibbs, Flora, Ind.; H. B. Hallenberger, Hannibal, Mo.; C. A. Hatterscheid, Corwith, Iowa; H. F. Hisgen, Chicago, Ill.; A. B. Hollis, Des Moines, Ia.; J. L. Hoyleman, Wilsonville, Neb.; J. B. Jaffray, Chicago, Ill.; G. W. Johnson, Chicago, Ill.; A. Kaderabek, Jr., Delafield, Wis.; W. H. Kenwell, Mt. Eaton, Ohio; H. J. Kohler, Somerville, N. J.;

E. L. Lewis, Opelousas, La.; Jas. Lewis, McKinney, Tex.; D. J. McMahan, Noblesville, Ind.; L. B. Michael, St. Jacob, Ill.; H. J. Mongeau, Manteno, Ill.; N. C. Nelson, Manistee, Mich.; J. H. Newman, Little Falls, Minn.; C. Olson, Athens, Ill.; G. M. Otis, Des Moines, Iowa; J. M. Parks, Covington, Ky.; L. J. Price, Liberty Center, Ohio; F. E. Perkins, Ellsworth, Wis.; L. H. Quitman, Chicago, Ill.; J. W. Robinson, Coal Harbor, N. D.; G. E. Repp, Chambersburg, Pa.; A. H. Schmoyer, Boynton, Pa.; C. J. Schults, Columbus, Wis.; R. Snyder, Dixon, Iowa; C. J. Spencer, Jasper, N. Y.; J. F. Spiker, Jr., Chariton, Iowa; C. E. Stockton, Braddock, Pa.; J. F. Talbert, Edgerton, Kas.; W. W. Talbot, Omaha, Neb.; J. L. Ward, Bowling Green, Mo.; C. M. Weese, Plattville, Ill.; G. R. Weise, Princeton, Ill.; M. M. White, Shreveport, La.; W. D. Wright, Walla Walla, Wash.; M. J. Woodliffe, Denver, Colo.; B. J. Zimprich, Marshall, Wis.

Prof. L. A. Merillat distributed prizes to the following: For highest general average, gold medal, Dr. C. G. Schultz, who also received the gold medal in anatomy; equine pathology, gold medal, Dr. Rudolph Snyder; cattle pathology, gold medal, Dr. B. J. Zimprich; general surgery, gold medal, Dr. Carl Olson; materia medica, Dr. L. H. Quitman; lameness, Dr. D. J. McMahan; bacteriology and physiology, Dr. J. L. Axby; meat and milk inspection, Dr. C. A. Dawdy; hygiene, Dr. J. W. Robinson; canine and feline pathology, Dr. J. B. Jaffray; helminthology, Dr. C. A. Dawdy; dentistry, Dr. L. B. Michael.

Dr. A. Kaderabek was class prophet and Dr. J. L. Axby was the valedictorian.

The exercises closed with the doctorate address by Prof. Baker, who gave some valuable advice to the new class and sent them forth with words of cheer and encouragement.

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The annual banquet tendered to the faculty and students by the Board of Trustees of the C. V. C., was held at the Sherman House, March 11, at 8 p. m., at which Prof. Quitman was toastmaster. Prof. A. H. Baker responded to the toast, "The Chicago Veterinary College;" Mr. F. H. McMahan, "Conclusions of a Senior Student;" Mr. G. H. Harland, "Conclusions of a Junior Student;" W. R. Edwards, "Aspects of the Profession in the South;" Prof. J. M. Wright, "The Profession, Past;" Prof. A. S. Alexander, "The Profession, Present;" Prof. G. A. Lytle, "The Profession, Future;" Prof. J. Dill Robertson, M. D., "The Sister Profession;" Dr. P. Quitman, "The Alumni of the

Chicago Veterinary College." Numerous impromptu toasts were responded to by the various members of the faculty and invited guests present. The musical programme furnished was as follows: Song, "The Goblins," by the College Quartette, Messrs. Axby, Parks, Hisgen, and Perkins; "Bedouin Love Song," solo, by Mr. W. H. Cork, Jr.; song, "Barcarolle," by Mr. J. M. Parks; song, "The Toreador Song," by Mr. W. H. Cork, Jr.; song, "Farmer John," by the College Quartette; whistling solo, by Prof. G. M. Cushing; song, "The Holy City," by Mr. J. M. Parks; piano solo by Mr. Irving C. Hancock.

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### OBITUARY.

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ROBERT C. JONES, D. V. S., of Waterbury, Conn., died about May 10th, following an operation on the base of the brain. He was a graduate of the American Veterinary College, class of 1886, and had practiced for a number of years at Port Jefferson, L. I., at which place his remains were buried in the family plot. He removed to Waterbury about three years ago, and soon after locating there his office, with all his paraphernalia, was burned in the great fire which devastated that city. Deceased was about 44 years of age.

DR. R. R. LETTS, a graduate of the American Veterinary College and a member of the Veterinary Medical Association of New Jersey, died at his home at Allendale, N. J., May 18th. Dr. Letts had been an Inspector at the Jersey City Stock-yards for several years, and was respected by all with whom he came in contact personally or officially. President Lowe appointed representatives of the State Association which attended his funeral, who conveyed an appropriate floral piece expressive of the sympathy of the profession.

DR. JAMES W. WHITE, Roberts, Ill., died on January 31, of diabetes. He was born at Alexandria, Ky., March 14, 1859. He held many positions of trust and honor in his home city, and enjoyed a good practice in conjunction with Dr. H. J. Campbell. He was a graduate of the Chicago Veterinary College.

DR. F. S. MCNAIR, Elburn, Ill., died on December 11, 1902, at Elburn. He was a graduate of the Chicago Veterinary College, class of 1893.

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THE story comes from the West that the old type of the Texas pony is about extinct. The war with Spain and the Boer conflict about used them up.

## SOCIETY MEETINGS.

### TEXAS VETERINARY MEDICAL ASSOCIATION.

Pursuant to a call issued by a committee of veterinarians of the State, composed of Doctors M. Francis, College Station; H. D. Paxson, Fort Worth, and W. A. Knight, Houston, the following veterinarians met at the Hotel Worth, Fort Worth, Tex., at 8 P. M., April 30, 1903, for the purpose of discussing the propriety of forming a State Association: M. Francis, College Station; W. A. Knight, Houston; Newton G. Le Gear, Waco; S. L. Blount, Temple; A. E. Flowers, Dallas; L. A. Klein, W. C. Bower, J. H. Lowe, H. D. Paxson, Fort Worth.

H. D. Paxson was selected as chairman of the meeting. Each one present was called upon for a free expression of his views concerning the advisability of forming the association. Each in turn responded; and it developed that there was a unanimity of opinion in favor of the movement. Enthusiastic talks were made, tempered with the conservatism necessary on account of the magnitude of the undertaking.

The Chairman read letters from the following veterinarians, who regretted their inability to attend the meeting, but each of whom pledged his support in the formation of an association: A. H. Wallace, San Antonio; C. M. Noble, Houston; Thos. A. Bray, El Paso; Irvin Owens, Greenville, and J. W. Burby, San Antonio.

The Chairman remarked that as no other replies had been received by him, the sentiment in favor of the movement was unanimous.

The meeting then, by unanimous vote, decided to form a State Veterinary Medical Association.

The following officers were elected for one year:

President—M. Francis.

First Vice-President—W. A. Knight.

Second Vice-President—Newton G. Le Gear.

Secretary—H. D. Paxson.

Treasurer—A. E. Flowers.

The Secretary read a proposed Constitution.

The following was adopted:

#### CONSTITUTION.

##### *Article I.*

Section 1.—This Association shall be known as the Texas Veterinary Medical Association.

Section 2.—Its object shall be to promote coöperation among its members, to supply a medium for exchange of professional experiences, and to encourage, develop and protect the veterinary profession within the State.

*Article II.*

Section 1.—The officers of this Association shall be a President, two Vice-Presidents, a Secretary and a Treasurer.

Section 2.—It shall be the duty of the President to preside at all meetings of this Association, to announce the business before the meeting, to submit all motions presented by members, to announce the vote on all matters presented, to appoint committees, to preserve order, and to perform such duties as are usually performed by such officer.

Section 3.—It shall be the duty of the First Vice-President to perform the duties of President in the absence of that officer; and it shall be the duty of the Second Vice-President to perform the duties of President in the absence of both of those officers.

Section 4.—It shall be the duty of the Secretary to preserve, in a suitable book, a record of all meetings, and at the expiration of his term of office to deliver it, in good order, to his successor. He shall order the official stationery of the Association.

Section 5.—It shall be the duty of the Treasurer to collect all fees or dues from members and to pay such debts as the Association may by a majority vote authorize him to pay. He shall keep a record of the affairs of the Association in a business-like way, and, at the expiration of his term of office, he shall deliver to his successor such record.

It was the sense of the Association that further adoption of a constitution should be deferred until the next meeting in order to give an opportunity to a greater number of veterinarians to assist. The President appointed those present a committee of the whole to complete the Constitution and report at next meeting.

The next meeting will be held at the call of the President; at this meeting the organization of the Association will be completed.

H. D. PAXSON, *Secretary*.

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PASSAIC COUNTY VETERINARY MEDICAL ASSOCIATION.

The regular monthly meeting was held at 169 Patterson Street, Paterson, N. J., on Tuesday evening, May 5th, 1903, with Dr. William Herbert Lowe, President, in the chair. Dr. William J. Fredericks was chosen Secretary *pro tem*.

On roll-call the following members answered to their names: Drs. William J. Reagan, William H. H. Doty, T. J. Cooper, John H. Degraw, Wm. Herbert Lowe, Paterson; J. Payne Lowe, Passaic; William J. Fredericks, Delawanna.

Dr. Anderson Crowforth, veterinarian, Lockport, New York,

uncle of Dr. Cooper, was present as the guest of the Association.

The minutes of the last regular meeting were read and approved.

Dr. Cooper, Chairman of the Special Committee on Substitute, reported that in case of sickness or in case of a member being out of town that the brother practitioner called upon to attend the sick or absent practitioner's cases should receive one-half of the fees for the services rendered, and that it be left to a practitioner's own option as to who would be called upon to help him out in cases of sickness and emergency. On motion, the report was received and opened for discussion. It was argued that this whole matter of a substitute was one that could be best managed and arranged between members themselves as necessity required, and that it would be an unwise thing for the association to attempt to regulate the terms in such cases. On motion, the adoption of the recommendations of the Committee on Substitute were lost. It was moved and carried that the committee be discharged with the thanks of the Association.

The Association received with much regret the resignation of Secretary Alexander Machan, which was made necessary on account of his moving to Canada. On motion his resignation was accepted and the Secretary instructed to send him a suitable letter expressing the regret of the Association of the necessity of his resignation. The Association proceeded at once to fill the vacancy in the office of Secretary. Dr. William J. Fredericks, of Delawanna, was nominated and elected by a unanimous vote.

President William Herbert Lowe reviewed briefly recent Legislative doings at Trenton that concerned the veterinary profession.

Chapter 55, Laws 1903, *Automobile Law*:—Every person driving a motor vehicle shall, at request or upon signal by putting up the hand or otherwise from a person riding or driving a horse or horses in the opposite direction, cause the motor vehicle to stop and remain stationary so long as may be necessary to allow said horse or horses to pass.

Chapter 181, Laws 1903, *Speedway Bill*:—Authorizes Boards of Chosen Freeholders to borrow moneys in their respective Counties for lands purchased for speedways to an amount not to exceed one hundred thousand dollars by issuing bonds of the respective counties.

Assembly Bill, No. 212:—To reopen the veterinary registration books of the state to non-graduates was promptly killed in

committee in the House of Assembly by the Veterinary Medical Association of New Jersey.

Chapter 228, Laws 1903, amends in several important particulars the act of 1894 regulating the practice of medicine and surgery in the state of New Jersey. The following clause is contained in the medical law as amended by the act of 1903: "This act shall not apply to any legally licensed and registered veterinary physician, surgeon or dentist of this state, engaged in the practice of veterinary medicine, surgery or dentistry in any of its branches." Veterinary practitioners "not legally licensed and registered" are liable to prosecution under the provisions of the medical act as well as under the provisions of the veterinary act. The penalty for violation of the medical law is the same as that for the violation of the veterinary law, viz.: for the first offence, a fine of not less than one hundred dollars, or by imprisonment in the county jail for a period of not less than thirty days, or by both fine and imprisonment, and for each subsequent offence the punishment is made double that of the preceding one.

President Lowe told of the indictment, conviction and imprisonment in Monmouth County of "Dr." R. R. Sample for practicing veterinary medicine illegally in violation of Chapter 18, Laws 1902, and stated that this was simply a *sample* of what might happen to others who dare practice veterinary medicine without a license in violation of the law.

The President expressed much gratification at the fact that every licensed veterinarian in Passaic County was a member of the local association and emphasized the fact that every member had paid his dues, and that every member was an earnest and loyal supporter of the association. President Lowe added that he knew of no other veterinary association, (local, state or national) where as much could be said in the above respects, and predicted great results for the profession in the future.

President Lowe then made two announcements as follows:—

Meeting of the State Board of Veterinary Medical Examiners for the examination of candidates for license to practice Veterinary medicine, surgery and dentistry in the State of New Jersey would be held in the Capitol at Trenton, on Tuesday and Wednesday, June 23d and 24th.

Meeting of the Veterinary Medical Association of New Jersey will be held at the United States Animal Quarantine Station, Athenia, N. J., on Thursday, July 9th.

Dr. Anderson Crowforth of Lockport, N. Y., was then called

upon and made an excellent address on veterinary progress that was both interesting and instructive.

Dr. Reagan gave a carefully prepared report of a case of "Traumatic Pericarditis in a Cow"\* and exhibited a lady's hat-pin that he had removed from the heart on post-mortem. Dr. Reagan said that he would present the pin to the association so that a museum might be started by the association. It was ordered that the report of Dr. Reagan's case be sent to the veterinary periodicals for publication.

On motion meeting adjourned at eleven P. M.

WILLIAM J. FREDERICKS, *Secretary*.

#### CENTRAL CANADA VETERINARY ASSOCIATION.

The second meeting of the Central Canada Veterinary Association was held in the Committee Room of the City Hall, Ottawa, on Monday evening, April 13th, President Harris in the chair. The meeting was well attended, those present being, Drs. Fisher and McGregor, Carlton Place; Higginson, Rockland; McGuire, Cornwall; Thacker, Renfrew; Young, Almonte; Young, Cobden; Young, Merrickville; Lynchke, Carp; Allen, Brockville; Haworth, Eganville; Rutherford, Harris, Higgins, Hollingsworth, White and Boucher, of Ottawa.

The following new members were elected: J. J. McGregor, Carlton Place; C. W. J. Haworth, Eganville; W. G. Gilpin, Ottawa; Charles Thacker, Renfrew; and J. Massie, of Kingston.

The Constitution and By-Laws as prepared by the committee appointed at the previous meeting were adopted with few changes. The Constitution and By-Laws provide rules for the conduct of business, a code of ethics regulating professional conduct; qualifications for membership, and a council to whom matters pertaining to the welfare of the Association are referred.

A resolution expressing sympathy with Dr. A. E. James, a member of the Council, in his recent illness was passed.

The coming meeting of the A. V. M. A. was referred to by Dr. J. G. Rutherford, who stated that while it was desired that as many as possible should avail themselves of the privilege to become members, this was not necessary and they would be heartily welcomed as guests at the meeting in September, when the veterinary profession would practically own the Capital City of Canada.

\* Published elsewhere in this number of the REVIEW.

On motion of Dr. Hollingsworth, of Ottawa, seconded by Dr. McGuire, of Cornwall, it was voted that the Central Canada Veterinary Association give the sum of \$100 toward the entertainment of the A. V. M. A. at its coming meeting.

Dr. J. G. Rutherford, Chief Veterinary Inspector to the Dominion, gave a very interesting and instructive talk upon the present method of dealing with glanders in this country. He stated that his idea in presenting in detail the present method of dealing with this disease, was to acquaint the members of the profession (who in the past had attempted to manage outbreaks under the Provincial laws), with a quicker and better solution of the problem, namely, that of reporting them to the department which had the authority to take the latter in charge without the delay necessitated by summoning witnesses and bringing delinquents before magistrates, which course has up to the present been necessary. He also stated that the practical results of the present methods of dealing with outbreaks of glanders would in all probability be presented to the meeting in September.

The report of a case of phimosis was given by Dr. Lynchke, of Carp, which evolved numerous comments and considerable discussion.

On motion of Dr. McGuire, the meeting adjourned.

CHARLES H. HIGGINS, *Secretary*.

#### AMERICAN VETERINARY MEDICAL ASSOCIATION.

AMES, IOWA, May 18, 1903.

*To the Members of the A. V. M. A. :*

The following contributions to the programme of the American Veterinary Medical Association for the Ottawa meeting have been offered :

"The Effect of Certain Drugs upon Blood-Pressure and Cardiac Inhibition in the Horse," Dr. Pierre A. Fish, Ithaca, N. Y.

"An Outbreak of Epizootic Encephalitis of the Horse in South Carolina," Dr. G. E. Nesom, Clemson College; S. C.

"Veterinary Dentistry ; Its Use and Abuse," Dr. T. S. Childs, Saratoga Springs, N. Y.

"Nitroglycerine," Dr. S. S. Whitbeck, Decorah, Ia.

"Immunization of Hogs Against Cholera," Dr. G. W. Dunphy, Quincy, Mich.

Papers have been promised by Dr. J. W. Connaway, Columbia, Mo. ; Dr. Leonard Pearson, Philadelphia ; Dr. E. M. Ranck, Natches, Miss. ; Dr. J. F. De Vine, Goshen, N. Y.

Others have signified their willingness to furnish a paper for the programme in case their services are needed. The subjects of these papers will be announced later.

It has been arranged with Hon. W. C. Edwards, M. P., of Rockland, Ont., Canada, to address the Association upon some topic of general interest.

Responses to requests which have been made for contributions to the programme have not up to this time been such as to warrant a very sanguine prediction as to the success of the literary part of the meeting. Much more is needed, and it must come very soon. If any member is aroused to an appreciation of the need for help in finishing the programme and will offer a paper, it will be gratefully received. It must soon be known what we will be able to do at Ottawa. Please let me hear the title of your paper at once.

JOHN J. REPP, *Secretary*.

#### SCHUYLKILL VALLEY VETERINARY MEDICAL ASSOCIATION.

This association will hold its annual meeting at the Park House, Pottsville, Pa., Wednesday, June 17th, 1903. An especially interesting programme has been arranged. All will be cordially welcome.

W. G. HUYETT, *Secretary*.

PRESIDENT WILLIAM HERBERT LOWE announces that the New Jersey State Board of Veterinary Medical Examiners will hold an examination of candidates for license to practice veterinary medicine, surgery and dentistry in the State of New Jersey on Tuesday and Wednesday, June 23d and 24th, 1903, in the Capitol at Trenton, N. J.

DR. W. T. MONSARRAT, of Honolulu, H. I., writes that while he cannot attend the Ottawa meeting of the A. V. M. A., in the flesh, he will surely be there in spirit. He is, however, already laying plans to be present at the convention of 1904.

DR. L. VAN ES, State Veterinarian of North Dakota, at the State Agricultural College, Fargo, writes that he has gotten his new work well under way, and will now have some leisure hours, and he expects to devote a few of these to preparing some translations from *Tijdschrift voor Veeartsenijkunde* for REVIEW readers. The first installment will be found elsewhere in this number.

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## NEWS AND ITEMS.

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DR. J. H. CONOVER, of Flemington, N. J., has been elected Chief of the Flemington Fire Department.

DR. H. N. MOYER, V. M. D., has moved from Pittsburgh to Monongahela City, Pa.

DR. JAMES C. MCNEIL, V. M. D., has been relieved as City Veterinarian owing to political changes in Pittsburgh, Pa.

DR. C. H. JEWELL, 13th U. S. Cavalry, Fort Meade, N. D., has suffered a sad bereavement in the loss by death of his wife.

DR. AUSTIN H. BAKER, of Chicago, Ill., is President of the Rio Grande and Southern Gold Mines Company, located in Southwestern Colorado.

DR. CONNAWAY, of the University of Missouri, is to be provided with an assistant, which will doubtless very greatly facilitate his work in his new veterinary building.

DR. JOHN J. MILLAR, late Secretary of the McKillip Veterinary College, Chicago, has entered private practice and opened an office at 2800 Michigan Ave., Chicago.

THERE are now thirty-three inspectors engaged in house-to-house inspection for foot-and-mouth disease in Massachusetts, and it is now confidently believed that the disease is thoroughly eradicated from that State.

THE ZEIGLER expedition in search of the North Pole, which has recently been fitted out for a second attempt, carried a large quantity of Spratts dog cakes, and cod liver oil cakes for its dogs. They will sustain the dogs better than any other food.

DR. CHAS. W. BOYD has been appointed City Veterinarian of Allegheny, Pa., to fill the vacancy occasioned by the resignation of Dr. J. Stewart Lacock, who has removed his office to his big boarding stables at Seventh Avenue and Grant Boulevard, Pittsburgh, Pa.

CORNELIUS C. LADUE, for forty years a veterinary surgeon, dropped dead from heart disease at Matteawan, April 18, while talking with an acquaintance on the street. Ladue had charge of the horses on ex-Fire Commissioner John J. Scannell's farm at Fishkill Landing, N. Y.

AUGUST BERG, a Chicago dog fancier, was bitten by a rabid dog on November 4, but felt no ill effects from it until January 14, when he recognized the symptoms and requested that he be taken to a hospital, where he was seized with convulsions soon after arrival and died at 6 o'clock of the same evening.

DR. I. W. HORTON, M. D. C., formerly of Providence, R. I., has located at Morgantown, W. Va., where he is enjoying a comfortable practice after spending three years in the 3d Cavalry, U. S. Army.

ROBERT B. OGILVIE, of Wisconsin, has been elected Vice-President of the Zenner Disinfectant Co., makers of the famous Zenoleum dip and disinfectant. He has taken charge of the Chicago office of that company and is located at 39 Exchange Avenue, Union Stock Yards, and will be pleased to see his friends at that address.

DR. CONNIFF has kindly furnished us with a copy of an article, read by G. A. Johnson, D. V. M., before the Sioux City Medical Society, entitled "A Compend on Milk." In looking over it carefully we are so much delighted with it that it has been put aside for our Twelfth Bi-ennial Report. Everybody is interested in milk, as it is one of the essentials of mammalian life. And yet we are woefully ignorant of many things in regard to milk that we ought to know. A careful perusal of this paper will prove highly instructive.—(*Iowa Health Bulletin*).

FEEDING VALUE OF MOLASSES.—Interesting articles recently published in the veterinary journals relative to this subject have caused no little stir among veterinarians and horsemen. The trend of the articles has been to show that cane-sugar molasses, diluted with an equal amount of water and mixed with cut hay or grass, forms a perfectly suitable food for horses and proves a valuable adjunct to ordinary rations in place of oats night and morning. The use of molasses, it is claimed, lessens the cost of maintaining horses, plumps them up, polishes their coats, cures chronic indigestion, does away with skin troubles, imparts vim and vigor and withal causes no disturbance of the digestive organs. It is recounted that weary, woebegone, emaciated, harness-galled saddlers have been made to blossom like the rose on a ration of molasses, water and cut hay or grass alone. So rapidly have these "pilgrims" become rejuvenated that their riders soon failed to recognize them, while hard working drafters, fed molassed food twice daily in place of oats, not only continue to perform their customary labor satisfactorily but gained in flesh and materially improved in appearance. All of this is sweet reading to be sure, but in our opinion should be taken with a liberal seasoning of salt. We are ready to concede that molasses will fatten and plump up emaciated horses, for it is a fattening food, easily digested and immediately assimilable. Its chemical constituents, in the form of sucrose and glucose, require little

elaboration in the stomach to become available. Its nutrients are at once seized upon and utilized. The resultant effect upon the animal is prompt and apparent. Naturally when the digestive apparatus has been so weakened by abuse that the nutrients of oats and other customary foods cannot be perfectly dealt with, molasses acts like a charm in that it practically nourishes without effort upon the part of the animal. In a normal, healthy state of the digestive organs, together with a sufficiency of time for proper mastication and insalivation, oats and bran would, however, more perfectly nourish growing or working animals. This fact is clearly shown by analysis of molasses which follows: Water, 35.06; Protein, 0.00; Sucrose, 18.30; Glucose, 43.78; Ash, 2.85. From this we see that molasses is rich in carbohydrates (starch, sugar, glucose, etc.) but altogether wanting in protein (nitrogenous matters), yet it is protein in food that repairs waste of tissues and goes to form muscle, tendon, hoof, hair, etc., and furnish vim, vigor, and stamina for hard labor. This protein is abundantly found in oats and bran. In the former we find 11.8 per cent. and in the latter some 15 per cent., so that these foods are particularly well adapted for the feeding of growing and working animals as they furnish not only protein, but a sufficiency of carbohydrates and fat, and are likewise rich in ash for bone building. Practical experience throughout the world has proved these foods best adapted for the feeding of growing and working animals, and we would not be justified in abandoning them for an "incomplete" food such as molasses, which fattens and furnishes heat but cannot fully repair waste tissue nor build up a strong muscular frame. When horses are sensibly managed by allowing ample time for the adequate mastication and insalivation of oats, bran, and hay; when they are allowed to rest before and after eating, and when drinking water is given before and not immediately after a meal, colics, chronic indigestion, and kindred ailments will become rare and the need for a food such as molasses disappear. In conclusion it may be added that peace and quietude are necessary to perfect mastication and digestion, but flies in summer time often so torment horses at their meals that they fail to derive full benefit from their food. Were they fed a sloppy mess of sweet, sticky molasses and cut hay during hot weather, one can well imagine the resultant condition of the stable. All of the flies in the district would gather there for the feast, then follow the poor beasts at their work to sip the sweets bespattered upon their faces and fronts. With all due respect for the em-

inent advocates of molasses as a food for horses, we submit that the foregoing facts are well worthy of weighty consideration.—*(A. S. Alexander, F. H. A. S., M. D. C., in Chicago Veterinary College Quarterly Bulletin.)*

THE VETERINARIAN'S READING MATTER.—I have discussed the educational work to be performed by the aspirant to a veterinary degree before graduation, and at this time will endeavor to show the advantages of continued study on the part of the graduate. The sources of information for the practising veterinarian are: 1, professional journals; 2, new works; 3, veterinary association meetings; 4, agricultural journals; and 5, postgraduate courses. To the recent graduate sources one, three and four are especially useful, two and five become more so after several years in practice. Unfortunately the professional journals have not the circulation they should have, and the loss falls the heavier on the profession at large, for the individual suffers by his neglect to read at least one journal regularly. The reasons for such a loss are at once seen when the advantages to be derived from subscribing and reading a professional journal are enumerated. It may be reiterated that the graduate who thinks his studying days are over as soon as he leaves college is deceiving himself only; sooner or later the public finds him out, and his income, if not suffering a decrease as the result, will certainly not increase. Five to ten dollars invested annually in the right kind of reading matter is money well invested for the following reasons: (a) The professional journal brings to the busy practitioner new ideas in a concise form; describes new instruments; discusses the newer drugs; and, if properly conducted, gives fair and honest criticism on the newer articles and methods, by men qualified to make such criticisms. (b) The professional journal is the medium through which reports of cases reach the practitioner, who may, in many cases, from the perusal of such reports, gain information from one issue worth far more than the subscription price of the journal. (c) Reviews of books, whether of new editions or works. If the reviews are made by experts who are fair-minded who withhold a recommendation unless a book deserves it, the journal will save its readers many dollars. Unfortunately, there is a tendency in some quarters to recommend or give a favorable review to all and sundry, thus encouraging the publication of books which are mere compilations, or else the aborted, undeveloped ideas of the authors. The veterinary reading public have to depend on the professional journal for pointers in their book investments, and have a right

to demand that only works of merit and use shall be recommended. The mere presentation of an author's copy or promise of advertising should not influence the reviewer in any way; few men but hate to say unpleasant things, even if such are the truth; here, however, the principle "the greatest good to the greatest number" should and must obtain! In the fourth place, the professional journal is a good ground for the interchange of views on professional and lay topics. To be a successful practitioner, one must be a man of the world and broad in his views. If, further, the practitioner's suggester and remembrance brings to his notice the new thoughts in human and comparative medicine, discoveries in other walks of science, all that the better. The above reasons advanced for the existence of the professional journal, and its support by the practitioner, cannot be denied. It may not, however, be as readily evident the reasons why a veterinarian should subscribe for and read an agricultural paper. The following succinct statement on the matter will suffice: "The agricultural journal will familiarize the veterinarian with the aims, trials and successes of his clients; such a knowledge must make him more acceptable to them. From his rural mentor he will glean the results of experiments in animal nutrition and farm hygiene, the outcome of treatment as the stockman sees it in actual practice; will be able to follow the shows, and be posted on the latest transactions in pure-bred stock, as also be able to feel the pulse of the laity, especially the reading and thinking element, and thus be enabled to diagnose quickly any change in the attitude of the farming community to the profession. In order to keep in touch with the great live stock fraternity and agriculturists generally, the veterinarian will find in the agricultural press his greatest ally. The constant study of the best text-books will aid in keeping the practitioner in touch with many phases of disease that through lack of opportunity he may be unfamiliar with; in the realm of disease, however, one never knows the time when such an immunity may disappear. The public press it is not necessary to recommend to the veterinarian—news is so eagerly sought after that few deprive themselves of a daily paper. Choice, however, should be made of a paper whose editorials show breadth of thought and honesty of purpose; such papers will invariably have reliable news. In all matters affecting the profession, the professional man should persistently endeavor to see that only reliable information is given to the public."—(*"Veterinarian," in Farmer's Advocate, Winnipeg, Man.*)

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"ZENOLEUM CALENDAR."

One of the handsomest calendars of the year has been issued by the Zenner Disinfectant Company, makers of Zenoleum Dip, 24 Bates St., Detroit, Mich., and they will be glad to send the readers of the AMERICAN VETERINARY REVIEW a copy postpaid. The picture is a reproduction in many colors of the famous painting, "Christmas Morn at Plymouth," by L. J. Ferris, and is a little gem worthy of framing.

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